CALIFORNIA COASTAL COMMISSION
South Coast Area Office
200 Oceangate, Suite 1000
Long Beach, CA 90802-4302
(562) 590-5071

[PLEASE NOTE: ADDENDUM 2 placed after the report.]

September 22, 2003

TO: Commissioners and Interested Persons

Th9a

FROM: Deborah Lee, District Director, South Coast District
Teresa Henry, Manager, South Coast District
Karl Schwing, Supervisor, Regulation & Planning, Orange County Area

SUBJECT: City of Dana Point Local Coastal Program Amendment 2-02

SUMMARY OF STAFF REPORT

DESCRIPTION OF THE SUBMITTAL

Amend the Dana Point Local Coastal Program (LCP) to certify the presently uncertified Dana Strands area and replace the 1986 Dana Point Specific Plan LCP as it pertains to the remainder of the 121.3 acre project site with the LCP that consists of the City's 1996 Zoning Code and the Land Use Element, Urban Design Element, and Conservation/Open Space Element of the City's General Plan and amend those documents, through the Headlands Development Conservation Plan (HDCP) to, among other things, authorize creation of a Planned Development District for the site to authorize development of 125 single family residential lots, a maximum of 110,750 square feet of visitor serving commercial land use including a 65 room inn, a 40,000 square foot commercial site and 62 acres of public parks, coastal trails and open space. The amendment affects the City's certified Land Use Plan and Implementation Plan.

The proposed LCP amendment affects 121.3 acres of land which is owned by a single entity, Headlands Reserve LLC. The site is located in the City of Dana Point, Orange County, immediately upcoast of the Dana Point Harbor (Exhibit 1).

SUMMARY OF STAFF RECOMMENDATION

This LCP amendment affects both the Land Use Plan and the Implementation Program. Commission staff recommends that the Commission **DENY** the proposed Land Use Plan and Implementation Plan Amendments. As submitted the land use plan and implementation amendments are inconsistent with various Coastal Act Policies pertaining to the protection of environmentally sensitive habitat, avoidance of hazards, protection of visual resources, and the protection of the marine environment. The motions to accomplish this begin on Page 8.

EXECUTIVE SUMMARY

The Dana Point Headlands (herein the 'Headlands') is the last large, relatively undeveloped area of land within the City of Dana Point's coastal zone, and among the few remaining such areas of its size along the Orange County coastline. The Headlands consists of a large promontory surrounded by steep bluffs that protrudes into the Pacific Ocean (which is the areas namesake land feature) as well as a smaller down-coast promontory with tall bluffs, known as Harbor Point, that overlooks the Pacific Ocean and Dana Point Harbor (Exhibit 2a). There are also several interior land features that define the site, including a depression known as the 'bowl', and a ridge line and hilltop that form the southern and eastern rim of the bowl area. Upcoast of the Headlands promontory, there are steeply to more gently sloping bluffs that descend to a sandy beach, known as the Strand. A portion of the Strand bluffs contain the remnants of a former mobile home park. Other than the remnants of the mobile home park and a plant nursery located in the bowl, the site is largely undeveloped (Exhibit 2b). The Headlands site offers expansive views to and along the shoreline of open spaces, rocky and sandy shorelines, the harbor, the Pacific Ocean, kelp beds, and the off-shore islands. The Headlands and Harbor Point promontory, the ridge line, hilltop and the interior sloping sides of the bowl, as well as smaller areas upon the Strand bluff face, contain coastal sage scrub and other native plant communities where fourteen (14) special status plant species have been documented (including Blochman's dudleya), and seven (7) special status wildlife species have been documented (including California gnatcatcher and Pacific pocket mouse). For its significant habitat, recognizable and visually stunning landforms, and remarkable views, the Dana Point Headlands are one of the California coastline's landmark resources –of local and statewide significance- worthy of the most careful planning efforts.

Planning efforts at the site, under the Coastal Act, date from 1980's at which time the area was unincorporated and a Local Coastal Program was adopted by the County for a significant portion of the site (Exhibits 3a-3c). The proposed LCP amendment would replace that plan with a new plan that does have many attractive features. Of particular note is the proposed designation of more of the Headlands promontory for conservation and placing more of the ridge and hilltop areas within recreational open space than is specifically contemplated in the existing plan. The proposed plan also contains significant pedestrian and bicycle trails and overlooks, view parks, new vertical access to the sandy beach, and the designation of the Strand beach for public use. The plan also contemplates a water quality management system that would treat on-site and off-site flows.

However, it must be remembered that the standard of review for an LUP amendment is consistency with the Chapter 3 policies of the Coastal Act and not the existing certified Plan or whether it improves upon the existing plan. With that in mind, the proposed LCP amendment raises several significant issues under the Coastal Act. First, the LCP amendment contemplates the destruction of sensitive habitat to allow the construction of single family residences, commercial development including a hotel, roads, parking areas, and community facilities including a lighthouse and several community and

interpretive buildings. Second, the LCP amendment contemplates about two million (2,000,000) cubic yards of grading (Exhibit 7b) and the construction of a 2,100 linear foot shoreline protective device (Exhibit 7a)to accommodate the construction of single family residences upon the Strand bluff face. Commission staff are recommending denial of the proposed LCP amendment due to the proposed plan's inconsistency with Sections 30210, 30212, 30213, 30240, 30251 and 30253 of the Coastal Act.

Commission staff, the City, and Headlands Reserve LLC (the landowner) have made efforts to resolve the issues raised by the proposed LCPA. These efforts have been challenging due to fundamentally different positions on: 1) the presence of sensitive habitat (i.e. Environmentally Sensitive Habitat Area) on the site and whether Section 30240 of the Coastal Act is applicable; 2) the role of a 1996 Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP) in both the identification of ESHA on the site and whether impacts to that habitat can be mitigated through that plan; 3) whether extensive grading of the bluff face to overcome geologic stability problems and the removal and reconstruction of an existing revetment to protect new development in the Strand is consistent with Section 30253 of the Coastal Act; and 4) if a basis for authorizing the shoreline protective device could be found, the need to maximize the quantity of dry sandy beach available to the public by choosing a type and alignment for the shoreline protective device to achieve that goal. The proposed LCPA also raises several other issues, such as gating the residential community in a manner that prohibits public entry by vehicle, the need to provide public access along the top of any shoreline protective device; in order to offset economic exclusivity in the coastal zone, the need to provide lower cost overnight visitor accommodations within coastal zone plans; and the need to address changes to the LCPA to ensure the presence of strong water quality policies, among other issues.

As is noted in some detail in the following findings, the City and landowner have offered some changes to the plan that partly address the issues above (Exhibit 6a-6b). For instance, the City and landowner have offered to reduce the footprint of the residential development in the bowl area in order to reduce the quantity of native vegetation impacted by development in that area. Also, the City and landowner have offered to provide a 'turn-key' hostel within the development that will provide lower cost overnight accommodations for visitors. In addition, the City and landowner have offered to implement some type of mechanized access from the bluff top to the beach (e.g. a funicular), in-lieu of allowing public vehicular access through the residential development to be located in the Strand. The City and landowner have also offered to limit the size of the reconstructed revetment to one that is no taller than, and in some cases, less tall than, the existing revetment. In addition, there has been an offer to place an 8 foot wide public trail along the top of the revetment in order to provide additional lateral access along the shoreline. These offers are 'informal' in the sense that they were made by City staff and the landowner and the City Council did not hold a public hearing and adopt or submit any changes to the LCPA by resolution, as is required under the Coastal Act statute and regulations.

Commission staff recognize the importance of resolving potential deficiencies in the existing LCP relative to the protection of ESHA and the intensity of residential and commercial development contemplated therein by replacing that existing LCP with a new plan. However, Commission staff do not concede that the existing LCP is as weak on the protection of ESHA as the City and landowner have indicated. Furthermore, Commission staff also recognize the importance of putting to rest questions over the nature of certain interests that may be present under a pre-1929, 291-lot subdivision of the Headlands property (Exhibit 2d). Thus, Commission staff have given careful consideration to the formal LCP amendment and the City and landowner's informal offers. The reduction to impacts upon ESHA, the provision of a hostel, the provision of public access along the revetment; and the provision for a funicular are all steps that improve the overall quality of the plan.

However, even with the changes offered, the plan would continue to authorize direct impacts upon ESHA for the construction of the hotel, the residential development in the bowl, and the various community facilities on the site. Furthermore, the plan continues to require the construction of a shoreline protective device to protect the new development in the Strand. It is therefore inconsistent with multiple Coastal Act policies, and staff recognizes that the Commission could only approve such a proposal under a "balancing" approach. Moreover, the Commission cannot even consider such an approach unless denial of the current proposal would be affirmatively inconsistent with Coastal Act policies. Still, Commission staff do believe there are significant challenges to development of the site, particularly given its past planning history and previously adopted planning documents. In addition, staff believes that a modified version of the current proposal could present the sort of conflict that would allow consideration of the proposal despite some remaining inconsistency with Coastal Act policies. Thus, staff remains open to the potential for a reasonable tradeoff in order to devise a plan that is, on balance, the most protective of coastal resources. However, the plan offered is not that plan.

Staff continues to be strongly opposed to developing the coastline in a manner that, at the outset, requires shoreline armoring. However, the circumstances present at this site leads staff to conclude that this may be where a trade off could occur in order to achieve protection of the significant biological resources on the site. A portion of the Strand has been previously developed with a mobile home park and most of the area presently has limited biological value. Whereas the biological resources are concentrated upon the Headlands promontory, Harbor Point promontory, ridge line, hilltop and the slopes of the bowl. Commission staff believe that, on balance, it would be most protective of coastal resources to protect the ESHA, in exchange for allowing development in the Strand and more level areas of the bowl that do not contain ESHA.

Commission staff continue to believe that the goal of protecting ESHA can be accomplished while at once continuing to allow the basic concepts brought forth in the proposed and newly offered plans to proceed. There is ample space within the Strand and bowl to accommodate a balanced mix of residential, overnight visitor accommodations, public view parks, visitor facilities including lighthouse and veterans

memorial, trails, and beach accessways. It also remains possible to develop the area near the corner of Pacific Coast Highway and Green Lantern with commercial uses and hostel without causing impacts to ESHA.

Staff remain prepared to work with the City and landowner on a plan like the one described above. However, significant changes to the LUP and IP are needed in order to implement those changes. Changes would need to be implemented within five interrelated documents that would comprise the LUP and IP (Land Use Element, Urban Design Element, Conservation Open Space Element, Zoning Code, and the Headlands Planned Development District). Without City and landowner support for the changes outlined above, Commission staff chose not to invest the significant quantity of time necessary to identify the specific changes necessary to the plan that was submitted by the City. However, the findings do outline in general the kinds of changes that would be necessary and are designed to serve as a framework upon which to build a new plan.

ADDITIONAL INFORMATION

For further information, please contact **Karl Schwing** at the South Coast District Office of the Coastal Commission at: **562-590-5071**. This amendment to the City of Dana Point LCP, is available for review at the Long Beach Office of the Coastal Commission or at the Community Development Department for the City of Dana Point. The City of Dana Point Community Development Department is located at 33282 Golden Lantern, Dana Point, CA 92629. **Genia Garcia** is the contact person for the City's Planning Department, and she may be reached by calling **(949) 248-3588**.

TABLE OF CONTENTS

I. Commission Resolutions on City of Dana Point Local Coastal Program Amendment 2-02

Following a public hearing, staff recommends the Commission adopt the following resolutions and findings. The appropriate motion to introduce the resolution and a staff recommendation is provided just prior to each resolution.

A. RESOLUTION #1 (RESOLUTION TO DENY CERTIFICATION OF THE DANA POINT LAND USE PLAN AMENDMENT 2-02, AS SUBMITTED)

Motion #1

*"I move that the Commission **CERTIFY** the City of Dana Point Land Use Plan Amendment 2-02, as submitted."*

Staff recommendation

Staff recommends a **NO** vote and the adoption of the following resolution and findings. An affirmative vote by a majority of the appointed Commissioners is needed to pass the motion.

Resolution #1

The Commission hereby **DENIES** certification of the Land Use Plan Amendment 2-02 as submitted by the City of Dana Point and adopts the findings set forth below on the grounds that the amendment does not conform with the policies of Chapter 3 of the Coastal Act. Certification of the Land Use Plan amendment would not comply with the California Environmental Quality Act because there are feasible alternatives or mitigation measures which could substantially lessen any significant adverse impact which the Land Use Plan Amendment may have on the environment.

B. RESOLUTION #2 (RESOLUTION TO DENY CERTIFICATION OF THE CITY OF DANA POINT IMPLEMENTATION PLAN AMENDMENT 2-02, AS SUBMITTED.

Motion #2

*"I move the Commission **REJECT** the City of Dana Point Implementation Plan Amendment 2-02, as submitted."*

Staff Recommendation

Staff recommends a **YES** vote. Passage of this motion will result in rejection of Implementation Program and the adoption of the following resolution and findings. The motion passes only by an affirmative vote of a majority of the Commissioners present.

Resolution #2

The Commission hereby **DENIES** certification of the Implementation Program submitted for City of Dana Point certified LCP and adopts the findings set forth below on grounds that the Implementation Program Amendment as submitted does not conform with, and is inadequate to carry out, the provisions of the certified Land Use Plan. Certification of the Implementation Program Amendment would not meet the requirements of the California Environmental Quality Act as there are feasible alternatives and mitigation measures that would substantially lessen the significant adverse impacts on the environment that will result from certification of the Implementation Program Amendment as submitted.

II. Procedural Process (Legal Standard For Review)

A. STANDARD OF REVIEW

The standard of review for land use plan amendments is found in Section 30512 of the Coastal Act. This section requires the Commission to certify an LUP amendment if it finds that it meets the requirements of Chapter 3 of the Coastal Act. Specifically, Section 30512 states: *"(c) The Commission shall certify a land use plan, or any amendments thereto, if it finds that a land use plan meets the requirements of, and is in conformity with, the policies of Chapter 3 (commencing with Section 30200). Except as provided in paragraph (1) of subdivision (a), a decision to certify shall require a majority vote of the appointed membership of the Commission."*

Pursuant to Section 30513 of the Coastal Act, the Commission may only reject zoning ordinances or other implementing actions, as well as their amendments, on the grounds that they do not conform with, or are inadequate to carry out, the provisions of the certified land use plan. The Commission must act by majority vote of the Commissioners present when making a decision on the implementing portion of a local coastal program.

B. PROCEDURAL REQUIREMENTS

Pursuant to Section 13551(b) of the California Code of Regulations, a resolution for submittal must indicate whether the local coastal program amendment will require formal local government adoption after Commission approval, or is an amendment that

will take effect automatically upon the Commission's approval pursuant to Public Resources Code Sections 30512, 30513 and 30519. The City's resolution of adoption (Ordinance No. 02-01) states that this LCP amendment will take effect upon Commission certification. If this certification is subject to suggested modifications by the Commission, this local coastal program amendment will not become effective until the City of Dana Point formally adopts the suggested modifications and complies with all the requirements of Section 13544 including the requirement that the Executive Director determine the City's adoption of the amendment to the Land Use Plan and Implementation Program is legally adequate.

III. Background

A. HISTORY OF CERTIFICATION OF CITY OF DANA POINT

Dana Point is a shoreline community in southern Orange County (Exhibit 1). Prior to the City of Dana Point's incorporation in 1989, the Commission approved the segmentation of formerly unincorporated Orange County's coastal zone into the Capistrano Beach, Dana Point, Laguna Niguel, and South Laguna segments. Following the City's incorporation in 1989 all of the geographic areas covered by the former Orange County LCP segments of Capistrano Beach, Dana Point, and Laguna Niguel were included within the city limits of the new City of Dana Point. In addition, a portion of the South Laguna segment was within the new City's boundary. The City combined the Capistrano Beach and Dana Point segments, and the portion of the South Laguna segment within its jurisdiction, into one certified LCP segment. After some minor modifications, the City then adopted the County's LCP documents as its first post-incorporation LCP. On September 13, 1989, the Commission approved the City's post-incorporation LCP. Meanwhile, the City did not adopt the LUP which had been certified as the Laguna Niguel segment (which contained the area known as the Strand). In order to differentiate between the new City of Laguna Niguel (which was also incorporated in 1989) and the Laguna Niguel planning area (which was within the new City of Dana Point and not within the new City of Laguna Niguel), the Laguna Niguel LUP planning area was re-named 'Monarch Beach'.

Since initial certification of the City's LCP, the City has taken steps to consolidate the LCP documents and update those documents to reflect the current needs of the City. The first step involved certification of a new land use plan (LUP) and implementation plan (IP) for the Monarch Beach area of the City under LCP Amendment 1-96. This action adopted, with modifications, a new Land Use Plan ("LUP") component consisting of three elements of the City's General Plan: Land Use, Urban Design, and Conservation/Open Space[1]. The implementing actions component of the LCP for the Monarch Beach area is the City's Zoning Code, as changed according to modifications

[1] Certain sections and policies within these documents that pertained to areas that were not being updated/re-certified were excluded from the certification. Among the areas excluded were the policies associated with the Dana Point Headlands, the harbor and the town center areas.

suggested by the Commission (herein referred to as the '1996 LCP'). When the Monarch Beach area was certified, the City chose to whitehole 'the Strand'. Thus, the Strand remained uncertified (Exhibit 3a).

The second step involved updating the Capistrano Beach area and incorporating it into the 1996 LCP. Similar to LCPA 1-96, LCPA 1-98 adopted the 1996 LCP comprised of the LUP that consists of the three elements of the City's General Plan and the IP consisting of the City's zoning code. The City adopted the modifications to the LUP and IP suggested by the Commission. The modified LCP for Capistrano Beach was effectively certified on July 13, 1999.

Those certified portions of the City that have not been updated remain controlled by the former County LCP documents that the City adopted when it incorporated (Exhibit 3a-3c). The City continues to incrementally update these areas to bring them into the 1996 LCP. The areas that remain to be updated are the town center, harbor, and the Dana Point Headlands (all of which are within the former County LCP segment known as the 'Dana Point Specific Plan Local Coastal Program', a.k.a. the '1986 LCP'). In addition, the Strands remains uncertified and has yet to be brought into the 1996 LCP.

B. AREA OF THE SUBJECT LCP AMENDMENT

The proposed LCP amendment focuses on the 121.3 acre Dana Point Headlands site (herein 'Headlands')(Exhibit 1). The Headlands, is one of the last undeveloped coastal promontories in Southern California. Topography of the site is varied. The highest elevation on the site is a conical hill that is approximately 288 feet above sea level (a.k.a. the 'hilltop'). The northern portion of the site is the location of a former trailer park on the bluff face. Some of the ancillary improvements including roads, a clubhouse, and tennis courts, still exist. The trailer park, and the steep eroded hillside to the south of it, is referred to as "the Strand." Slope gradients in the Strand range from 1.5:1 to 2:1[2]. A former nursery facility is located east of the Strand and south of Pacific Coast Highway and consists of greenhouses, ornamental plantings and disturbed areas, in an area referred to informally as the 'bowl' (Exhibits 2a-2b). South and east of the nursery facility lies a large patch of coastal sage scrub (CSS) with patches of southern coastal bluff scrub occurring along the rim of the 'bowl'. Maritime succulent scrub occurs in the hilltop area and southern needlegrass grassland occurs near the Pacific Coast Highway, in the northwesterly portion of the site. Southern mixed chaparral occurs along the westerly portions of the site closest to Street of the Green Lantern.

The southwestern and southeastern portions of the Headlands site are underlain with sandy soils and have been labeled the Headlands promontory and the Harbor Point promontory, respectively. These promontories are terraces that extend seaward to

[2] URS Corporation. 2001. Terrestrial Biological Resources Errata and the Biological Resources Report, The Headlands, Prepared for the City of Dana Point as Attachment B: to EIR Section 4.3 dated September 2001.

coastal bluffs that are from 155 to 220 feet in height. Coastal sage scrub, southern coastal bluff scrub and southern mixed chaparral cover these promontories (Exhibit 15).

Dana Point Marine Life Refuge and the Niguel Marine Life Refuge lie immediately offshore of the Headlands site. Doheny Marine Life Refuge lies to the south. These refuges have been so designated due to the high quality of the marine resources that occur there (Beauchamp 1993).

Of the 121.3 acre area, 95.1 acres are presently certified under the 1986 LCP (Exhibits 3a-3c, 5c). The existing LCP divides the project site into residential, visitor serving commercial, and open space/conservation land uses. The following chart describes the distribution of land uses for the Headlands site as presently certified compared with the proposed land uses, including the area to be newly certified:

Land Use	**Certified LCP (Acres)**		**Proposed LCP (Acres)**	
	Certified Area	**Un-certified Area**	**Certified Area**	**Un-certified Area to be Certified (26.2 ac.)**
Residential	23 (approx.)	0	34.2	18.2
	(310 Units)	0	(125 Units)	
Tourist/Recreation/ Commercial[3] + public right of way	20 (approx.)	0	6.9[4]	0
Recreational Open Space	6.5 (approx.)	0	23.7[5]	8
Conservation[6]	27.3	0	30.3[7]	0
Other Open Space[8]	18.3	0	No such category under proposed LCP	No such category under proposed LCP
Subtotal	95.1	26.2	95.1	26.2
Total	121.3		121.3	

[3] The Tourist/Recreation/Commercial (5.31) land use designation in the certified LCP contemplates a mixture of recreational open space and commercial structures such as hotels and visitor serving commercial. Whereas the Visitor/Recreation Commercial land use category contemplated in the proposed LCP is focused on visitor serving commercial development (i.e. hotels/commercial) exclusive of open space

[4] This number comprised of proposed Planning Areas (PA) 4 and 9 plus 2.5 acres public right of way

[5] This number comprised of proposed PA 1, 3, 5, and 8A

[6] The "Conservation" land use category in the certified LCP and proposed LCP is the most restrictive on development generally limiting the land to natural conservation but allowing minor appurtenances

[7] This number comprised of proposed PA 7 and 8B

[8] The "Other Open Space" land use category in the certified LCP are lands "of notable scenic, natural and cultural attraction, or special ecological, wildlife or scientific study potential, and areas of topographical, geographical, and historical importance". Principal permitted uses are pedestrian access, passive recreation, coastal viewing, and parking to support those uses. The category allows trails, stairways, signs, view points, roads, off street parking, restrooms, weather shelters, other park facilities such as seating, maintenance buildings and information centers, walls, fences, drainage facilities.

C. CURRENT SUBMISSION

On May 30, 2002, staff for the South Coast District of the Coastal Commission received from the City of Dana Point Local Coastal Program Amendment (LCPA) 2-02 (Exhibits 4a-4f, 22-24). This LCP Amendment affects the City's certified Land Use Plan and Implementation Plan. The proposed LCP amendment has a complex structure and is packaged in a manner that can be confusing to the reviewer. First, the existing LCP document that applies to the area, the 1986 plan (Exhibit 3b), including LUP and IP are to be entirely replaced for the Headlands area. The LCP amendment proposes to replace the 1986 plan, with the 1996 plan, which consists of three elements of the City's General Plan (the Land Use Element (LUE), Urban Design Element (UDE), and Conservation Open Space Element (COSE)) (Exhibit 22) as the LUP, and the City's Zoning Code as the baseline IP (Exhibit 23). Next, the submittal modifies and adds policies to the LUP to accommodate the development plan at the Headlands through the proposed Headlands Development Conservation Plan (HDCP) (Exhibit 24). The HDCP adds a new chapter to the zoning code, Chapter 9.34, that allows the City to create planned development districts (PDDs). Finally, the HDCP includes a PDD for the Headlands area. The PDD is part of the IP, not the LUP.

There is a document titled the 'Headlands Development and Conservation Plan' or HDCP dated July 24, 2001, that packages some, but not all, of the components of the above described LCP amendment (Exhibit 24). The HDCP document does not contain the baseline 1996 LUP in its entirety or IP. Rather, the HDCP contains five sections. Section 1.0 identifies only the proposed changed and new policies of the 1996 LUP. In addition to the changes to the 1996 LUE, UDE, and COSE, Section 1.0 shows changes to other elements of the City's General Plan, such as the Circulation Element, Public Safety Element, and Public Facilities/Growth Management Element. These other elements are not part of the 1996 LCP and the proposed amendment does not seek to certify these other elements as part of the 1996 LCP. Section 2.0 contains new Chapter 9.34 which is proposed to be added to the 1996 IP/Zoning Code. Sections 3.0 and 4.0 are the proposed PDD for the Headlands. Section 5.0 of the HDCP is an analysis of the proposed PDD with the Coastal Act.

On June 12, 2002, Coastal Commission staff notified the City of Dana Point that the submittal was incomplete and that additional information would be required to complete the submittal. Pursuant to Section 30510(b) of the Coastal Act, the submittal was deemed to be complete and in proper order for filing as of August 5, 2002.

Pursuant to Sections 30512 and 30514 of the Coastal Act and Section 13522 of the Commission's regulations, an amendment to a certified LCP affecting the land use plan and implementation plan, must be acted on by the Commission within 90 days after the submittal request has been deemed to be in proper order for filing. However, on September 12, 2002, the Commission pursuant to Section 30517 of the Coastal Act

granted an extension to the ninety (90) day time limit. This time limit extension is valid until November 3, 2003.

1. LAND USE PLAN AMENDMENT

This LCP amendment proposes to replace –in its entirety- the certified Land Use Plan (the 1986 plan) presently effective on 95.1 acres of the 121.3 acre Dana Point Headlands site and to newly certify the remaining 26.2 acres (commonly known as the 'Strand'). The new plan will consist of the 1996 LUP comprised of the Land Use Element, Urban Design Element, and Conservation/Open Space Element of the City's General Plan which are to be further amended to authorize development of 125 single family residential lots on 52.4 acres, a total of 4.4 acres of visitor serving commercial land use including up to 110,750 square feet including a 65 room inn on 2.8 acres, a 40,000 square foot of commercial on 1.6 acres, 62 acres of public parks, coastal trails and open space, and 2.5 acres of public right-of-way/roads at the 121.3 acre site (Exhibits 5a-5c). Each of these elements is discussed more fully below.

The proposed LUP amendment is focused on the Headlands site, however, certain changes to policies in the 1996 LUP to accommodate the Headlands development plan would be effective everywhere in the City that the 1996 LUP is the controlling LUP. For instance, the LUP amendment contains language regarding the creation of planned development districts (PDDs) in the City that would apply to the entire area controlled by the 1996 LUP.

As stated in the LUP itself, one characteristic of the LUP is an absence of specificity regarding development of the Headlands site. The LUP states the purpose of this is "…to provide both the City and property owner with the flexibility needed to allow consideration of alternative development designs…" Accordingly, the LUP policies are non-specific. When specificity is provided, the detail is deferred to the IP/PDD for the Headlands area.

a) Residential Land Use

The proposed LUP would designate 52.4 acres of the 121.3 acre Headlands area for residential uses. The residential land use is divided into two areas, one within the Strand, and one in the area of the site commonly called the 'bowl' (Exhibits 2a, 5a). In the Strand, the proposed LUP would allow a density of up to 3.5 dwelling units per gross acre. Within the bowl, the LUP would allow a density of 2.5 dwelling units per gross acre. Although general floor area ratios are identified in the LUP, specific policies identifying maximum structural size, height, or setbacks are not provided in the LUP, rather, they are deferred to the IP/PDD for the site.

The configuration of the residential area would overlap areas containing existing native vegetation and sensitive wildlife and habitat areas that have been identified as environmentally sensitive habitat areas (ESHAs) by the Commission's biologist (Exhibit

15a). Of the approximately 50.3 acres of ESHA depicted on Exhibit 15a, there is an overlap of at least 15.1 acres for Planning Areas 6 (residential) and 9 (hotel/VRC) plus additional acreage associated with the roads, parking areas, and community facilities (Exhibit 15c). Furthermore, the area of required fuel modification extends beyond the boundary of the residential land use designation into the area identified in the proposed LUP as Recreation Open Space and/or Conservation Open Space. The maximum width of fuel modification is not identified in the LUP, however, additional detail is supplied in the IP/PDD. Nevertheless, any detail provided is conceptual and subject to additional negotiations between the landowner, City and Orange County Fire Authority.

Also, developing a residential area in the Strand to the density proposed would – according to the City and landowner- necessitate significant grading and geologic remediation of the site (Exhibit 8a-8f). The area to be graded and developed in the Strand is almost entirely bluff face. Furthermore, the development configuration contemplated relies on the construction of a 2,100 linear foot long shoreline protective device. In this case, the shoreline protective device contemplated in the LUP would be a revetment in the same alignment as an existing dilapidated revetment (Exhibit 7a).

b) Commercial Land Use

The proposed LUP would designate 2.8 acres of visitor/recreation commercial land use in the bowl/hilltop area that will allow a maximum of 110,750 square feet of visitor serving commercial use including a sixty-five (65) room inn. In addition, at the corner of Coast Highway and Street of the Green Lantern, a 1.6 acre area is designated for up to 40,000 square feet of visitor/ recreation commercial use.

As modified by the LUP amendment, the “Visitor/Recreation Commercial” designation includes primarily visitor-serving uses, such as restaurants, resort uses, such as hotels and motels uses, commercial, recreation specialty and convenience retail goods and services, auto service businesses, open space/recreational uses, and community public facilities. Other supporting uses include conference facilities and cultural uses, such as museums and theaters.

The 2.8 acres slated for the 65 room inn is almost entirely within ESHA as identified by the Commission’s biologist. In addition, portions of the commercial area at the corner of Coast Highway and Green Lantern overlap ESHA.

c) Recreation/Open Space & Roads

The Recreation/Open Space designation in the LUP does not differentiate between open space oriented toward more active recreational uses such as ball fields from more passive recreational uses such as trails, nor does it separate recreation oriented open space from habitat preservation oriented open space. As noted elsewhere, such details are deferred to the IP/PDD. The proposed LUP would designate a total of 62 acres of

recreation/open space, plus 2.5 acres of public right-of-way/roads, on the 121.3 acre Headlands site.

Although there are no distinguishing designations in the LUP or specific policies that make a distinction, narrative in the Conservation/Open Space Element (COSE) portion of the LUP identifies the quantity of recreation/open space to be provided in the Headlands and the type of recreation/open space uses these areas are to accommodate. Recreation oriented open spaces totaling 31.7 acres include Strand Vista Park (9.9 acres) that would overlook Strand Beach (5.2 acres); Harbor Point Park (4.3 acres) that would overlook the Dana Point Harbor; and Hilltop Park with greenbelt (12.3 acres) an inland high point that includes the rim of the bowl area on the site that would include ocean view and overlook open space areas and the proposed commercial and residential areas. Conservation oriented open space areas totaling 30.3 acres include the Headlands Conservation Park (24.2 acres) and Harbor Point Park (6.1 acres) that are both bluff with bluff top promontories on the Headlands site.

Excepting Strand Vista Park, Strand Beach, existing asphalt roads, and certain pockets of highly disturbed native vegetation, all of the proposed recreation/open space areas have been identified by the Commission's biologist as existing ESHA. The proposed LUP would allow some uses within certain recreation/open space areas that would disturb and degrade the ESHA. These uses include community structures such as a lighthouse and community/visitor facility buildings, hardscape, parking lots, and fuel modification. The proposed LUP also designated 2.5 acres of public right-of-way/roads on the Headlands site. Some of these roads/right-of-way overlap ESHA.

d) Orange County Central Coastal Subregion NCCP/HCP

The proposed LUP acknowledges that certain types of sensitive habitat and wildlife would be impacted should development be undertaken as contemplated in the LUP. The LUP proposes to mitigate impacts to sensitive habitat on the site by requiring restoration of native habitat on-site within recreation/open space areas that are presently or are proposed to be disturbed or otherwise degraded and through the Headlands' landowners' participation in the Central Coastal Orange County Natural Communities Conservation Plan/Habitat Conservation Plan (herein 'NCCP/HCP') adopted by the U.S. Department of Interior, the U.S. Fish and Wildlife Service (USFWS), the California Resources Agency, the California Department of Fish and Game (CDFG), the California Department of Forestry and Fire, the California Department of Parks and Recreation, and the Orange County Environmental Management Agency, in conjunction with participating property owners, in 1996 (Exhibits 11a-11c).

The LUP does not refer to the sensitive habitat and wildlife areas to be impacted on the site as ESHA. Rather, the LUP adds language to certain policies in the 1996 LUP that defer to the findings made in the NCCP/HCP and associated CEQA documents relative to the quality and long term viability of the habitat on the site and the circumstances

under which habitat on the Headlands site may be impacted and then mitigated through participation in the NCCP/HCP.

The NCCP/HCP creates a habitat reserve and management program designed to conserve a variety of sensitive plants and wildlife. Among other species, the NCCP/HCP provides coverage for impacts to California gnatcatcher, Pacific pocket mouse, Blochman's dudleya, Cactus wren, western dichondra, Nuttall's scrub oak, cliff spurge, Palmer's grappling hook. In total, the habitat reserve consists of 38,738 acres of land located in two areas of the county. A portion of this reserve, 10,960 acres, is located within the coastal zone (Exhibit 11c). All of the reserve area located in the coastal zone consists of land that had previously been preserved as parkland or other publicly held land or of privately owned land previously committed to dedication as open space under existing development entitlements (e.g. The Irvine Company, Irvine Coast Wilderness, Muddy Canyon, Los Trancos Canyon)[9]. Approximately 50% of the reserve in the coastal zone contains coastal sage scrub habitat. About 740 acres of suitable pocket mouse habitat is within the proposed NCCP reserve, however, none of this acreage is known to be occupied by the Pacific pocket mouse. In addition, although the NCCP/HCP provides coverage for impacts to Blochman's dudleya, no existing or suitable habitat for Blochman's dudleya was identified within the proposed NCCP/HCP reserve.

As a landowner participant to the agreement, the NCCP/HCP requires the Headlands' landowner to:

- Contribute $500,000 toward a $10.6 million endowment for the 'NCCP Non-Profit Corporation' and 'Adaptive Management Program'

- Establish an 8-year temporary 22 acre preserve for Pacific pocket mouse on the headlands (with option for additional 4 years of extensions), to expire in 2008

- Commit to negotiate an option agreement to provide opportunity for the USFWS and CDFG to purchase the 22 acre pocket mouse preserve at the end of the 8 year temporary preserve period, to expire in 2004. If the preserve is not acquired within the specified period, and following a pocket mouse relocation effort, the participating agencies have authorized the take of all species covered by the NCCP/HCP within the 22 acre preserve.

- Contribute $350,000 to fund Pacific pocket mouse population propagation, enhancement, relocation and recovery efforts upon issuance of Section 10(A)(1)(A) permit for pocket mouse

- Contribute to the cost of preparation of the NCCP/HCP

[9] Figure 14, County of Orange & U.S. Fish and Wildlife Service. 1996. Natural Community Conservation Plan & Habitat Conservation Plan & EIR & EIS, County of Orange, Central & Coastal Subregion, Map Section (Figures 1 through 76). May 1996.

- Commit to transplant, at CDFG's request, any Blochman's dudleya populations at Headlands Reserve's expense (not to exceed $23,000) that would be directly impacted by development on the property. Subject to CDFG approval, the landowner may collect and sow seed, rather than translocate individual plants. Under this commitment, the landowner has no responsibility to acquire or maintain land to which Blochman's dudleya would be transplanted. Furthermore, if CDFG fails to identify and secure an appropriate translocation site within one year of the landowners' request to identify such location, the landowner is no longer obligated to translocate the Blochman's dudleya.

The U.S. Fish and Wildlife Service and California Department of Fish and Game have indicated that the landowners have 'carried out all of their conservation commitments according to schedule'[10].

There are a variety of other mutual agreements between the participating landowners and agencies that are established in the NCCP/HCP Implementation Agreement. For instance, CDFG and USFWS agreed to provide letters to the City of Dana Point and the Commission with respect to the development of the subject property. In addition, the landowner agreed to propose and promote certain measures within the temporary Pacific pocket mouse preserve[11] (Exhibits 14b, 14c).

In exchange for the landowner's commitments identified above, the participating agencies have authorized the landowner to impact up to 30 acres of coastal sage scrub (CSS) habitat on their property. In addition, the landowner is allowed to 'take' (within the meaning of this term under the Federal and State Endangered Species Acts) any of the sensitive species covered by the NCCP/HCP on Headlands property. The actual take is authorized under an incidental take permit issued by USFWS (TE810581-1).

2. IMPLEMENTATION PROGRAM AMENDMENT

This LCP amendment proposes to replace –in its entirety- the certified Implementation Plan (the 1986 plan) presently effective on 95.1 acres of the 121.3 acre Dana Point Headlands site and to newly certify the remaining 26.2 acres (commonly known as the 'Strand'). The new Implementation Plan (IP) will consist of the 1996 IP comprised of the City's Zoning Code which is proposed to be further amended to include provisions for the creation of planned development districts (PDDs) in the City and at the same time create a PDD for the 121.3 Headlands site (Exhibits 4a-4f, 5b).

The proposed IP amendment is focused on the Headlands site, however, certain changes to the 1996 IP to accommodate the Headlands development plan would be

[10] U.S. Fish and Wildlife Service & California Department of Fish and Game. 2003. Dana Point Headlands Development and Conservation Plan, City of Dana Point, Orange County, California. Letter from William E. Tippets, CDFG, and Karen A. Goebel, USFWS to Mike Reilly, California Coastal Commission dated March 28, 2003.

[11] Section 8.3.2(a)(1)(C), U.S. Fish and Wildlife Service & California Department of Fish and Game, et. al. 1996. Implementation Agreement Regarding the Natural Community Conservation Plan for the Central/Coastal Orange County Subregion of the Coastal Sage Scrub Natural Community Conservation Plan. Dated July 17, 1996.

effective everywhere in the City that the 1996 IP is the controlling IP. For instance, the IP amendment adds a section pertaining to the creation of planned development districts (PDDs) in the City that would apply to the entire area controlled by the 1996 IP.

a) Adoption of 1996 IP/Zoning Code

The Commission has previously certified the 1996 IP through LCP Amendments 1-96 (which made it effective in the Capistrano Beach area of the City) and 1-98 (which made it effective in the Monarch Beach area of the City). The proposed IP amendment would apply the 1996 IP/Zoning Code to the Headlands area.

b) Modifications to 1996 IP/Zoning Code

The proposed amendment would also modify the previously certified 1996 IP/Zoning Code to create Chapter 9.34 that inserts the ordinance that allows the City to adopt Planned Development Districts (PDDs). PDDs are similar to specific plans in that both implement general plan/LUP policy by establishing regulations, conditions, and programs concerning development standards and precise location for land use and facilities; standards and locations for streets, roadways, and other transportation facilities; standards indicating population density and building intensity, and provisions for supporting services and infrastructure; specific standards designed to address the use, and development and conservation of natural resources. According to the LUP, PDDs are different from specific plans in that they also establish regulations, conditions and programs concerning developments that provide a mix of land uses; creative approaches in the development of land; more accessible and desirable use of open space area; variety in the physical development pattern of the city; and utilization of advances in technologies and programs that are innovative to land development.

c) Headlands Planned Development District (Key Features)

The Headlands PDD is comprised of Sections 3 and 4 of the HDCP (Exhibit 24). Section 3.0 establishes the project zoning and development standards, and incorporates by reference the general provisions, the land use plan, and definitions. Section 4.0 provides development guidelines for the area. The PDD augments the development standards identified in the IP/Zoning Code, and supercedes those standards where they conflict with the IP/Zoning Code or where the PDD otherwise specifies that the standards identified supercede those identified in the IP/Zoning Code.

The HDCP also contains Section 5.0 that contains the City and landowners analysis of the HDCP's conformance with the Coastal Act. Section 5.0 does not contain any provisions beyond those described in Sections 3 and 4 of the HDCP.

The PDD breaks the Headlands site up into various planning areas, labeled Planning Areas 1-9 (Exhibit 5b). The major elements of these planning areas are discussed below:

(1) Residential, Planning Area 2 (The Strand)

The PDD creates 25.7 acres of residential zoning in the Strand. A maximum of 75 single-family residences would be allowed within this area. Maximum height is 2-stories, 28 feet above finished grade (not existing or natural grade) for primary structures, and 16 feet for detached accessory structures. A minimum 15-foot rear yard setback, measured from the top of slope for the building pad, is required on all lots. There is no distinct, shorefront development setback. Thus, the 15-foot rear yard setback is the shorefront setback. No stringline for shorefront development is established either.

The PDD specifies that grading will terrace the area to maximize views from the residential lots. Furthermore, as described above, the PDD allows for the construction of a 2,100 linear foot shoreline protective device to protect the new residential development. The PDD also specifies that the residential area will be gated to control vehicle access. Allowances are made for the provision of public pedestrian and bicycle access through the area.

(2) Residential, Planning Area 6 (Upper Headlands/Bowl Area)

Planning Area 6 is comprised of 26.7 acres of residential use. A maximum of 50 single-family residences could be authorized in this area. Maximum height is 1-story, 18 feet above finished grade for primary and accessory structures. Soil removed as part of the grading and geologic remediation in the Strand would be deposited in Planning Area 6 and graded into terraces so that the residences in Planning Area 6 would have ocean views. The residential community would be gated to control vehicle access. There are no specific provisions for public pedestrian and bicycle access through the area.

(3) Visitor/Recreation Commercial, Planning Area 4 (PCH & Green Lantern)

Planning Area 4 is a 1.6 acre site located at the corner of Pacific Coast Highway and Street of the Green Lantern. Up to 40,000 square feet of commercial and office uses would be allowed on this site. The first floor is limited to retail commercial uses, and the second floor could have retail or professional offices. Maximum height is 2-stories, 31-35 feet, measured from either finished floor, finished grade, or the ceiling of the basement or subterranean parking garage of the structure, whichever is lower.

Permitted uses in Planning Area 4 under the PDD are bed and breakfast inn, clinical services, cultural uses, educational uses, food service uses/specialty, fractional ownership, hotel, marine uses, open space, personal service uses, photographic, reproduction and graphic service uses, professional office uses on the second floor or below street level, restaurant, and retail sales. A variety of other uses are also permitted subject to conditional use permits or as accessory uses such as commercial antennas, day care centers, furniture stores, massage establishments, membership organizations, walkup and take-out restaurants.

(4) Visitor/Recreation Commercial, Planning Area 9 (Resort Seaside Inn)

Planning Area 9 is a 2.8 acre site generally located near the corner of Street of the Green Lantern and Harbor Drive, and overlooks Harbor Point and the Dana Point Harbor. The PDD would authorize up to 110,750 square feet of commercial floor area, with a maximum height of 3 stories, 42 feet measured from either finished floor, finished grade, or the ceiling of the basement or subterranean parking garage of the structure, whichever is lower.

The primary permitted use of Planning Area 9 is a bed and breakfast inn or hotel (e.g. 65 room inn). Permitted uses, only in conjunction with a seaside inn, are caretakers residence, clinical services, cultural uses, fractional ownership, and restaurant. Uses subject to a conditional use permit, also only in conjunction with an inn, are commercial antennas, commercial entertainment uses, commercial recreational uses, day care centers, educational uses, live entertainment uses, massage establishments, walkup restaurant, and video arcades/game rooms. Accessory uses allowed are food service uses/specialty, personal service uses, professional office uses, recreational use, and retail sales use.

(5) Recreation Open Space, Planning Area 1 (Strand Vista Park/Public Beach Access)

Strand Vista Park would consist of 9.9 acres. This park would be located seaward of the existing County park and landward of the proposed residential development. A linear trail with benches and tables along the bluff top would provide views of the Pacific Ocean. Planning Area 1 also contains the existing County stairway that presently provides access to Strand Beach along the northerly edge of the Headlands site. The PDD includes provisions to upgrade this existing stairway. At the southerly end of Planning Area 1, the PDD includes provisions to construct a new public access pathway from the bluff top to the beach. Finally, a new public pedestrian access is contemplated from the bluff top through the central portion of the Strand residential to the beach.

Under the PDD, uses permitted in areas designated Recreation Open Space (REC/OS), are visitor recreation facilities, cultural uses, kiosks/gazebos, outdoor artwork, public land uses, hiking and biking trails. Commercial uses would also be allowed subject to a

conditional use permit, and temporary uses would also be allowed subject to special use standards identified in Chapter 9.39 of the IP/Zoning Code.

(6) Recreation Open Space, Planning Area 3 (Strand Beach)

According to the City and landowner, Strand Beach, located seaward of the Strand, is presently private property to the mean high tide line[12],[13], [14]. The proposed PDD indicates this beach (5.2 acres) is to be dedicated to the public. However, neither the event triggering the dedication requirement nor the timing by which the dedication must occur is identified. The public would access this beach from the bluff top and existing County parking lot via the existing and proposed to be upgraded North Strand Beach Access, and the Central Strand and South Strand Beach accessways proposed in the PDD.

(7) Recreation Open Space, Planning Area 5 (Hilltop Park & Greenbelt Linkages)

Planning Area 5 comprises 12.3 acres and contains the 'hilltop' portion of the property and the rim of the 'bowl' portion of the property, as well as open space corridors, or greenbelt linkages, around the perimeter of residential Planning Area 6. Uses identified in the PDD are an open air visitor/education center, trails, overlooks, seating, parking for access to the open space, signs, fencing, habitat preservation, landscaping and fuel modification.

(8) Recreation Open Space, Planning Area 8A (Harbor Point Park)

Planning Area 8A would be 4.3 acres and contain the more level, interior portions of the Harbor Point promontory that overlooks Dana Point Harbor. The PDD designates this area for visitor recreation education facilities, such as a lighthouse, cultural arts center, nature interpretive center, trails, memorials, picnic areas, scenic overlooks, benches, signs, kiosks, fencing, and landscaping.

[12] Headlands Reserve LLC. 2002. City of Dana Point LCP Amendment No. 2-02, Headlands Development and Conservation Plan. Letter dated July 30, 2002 from W. Kevin Darnall, Headlands Reserve LLC to Karl Schwing, California Coastal Commission.
[13] Chicago Title Company. 2002. Policy No. 7300387-M07. Letter from Charles Axen, Chicago Title Company to W. Kevin Darnall, Headlands Reserve LLC regarding ownership and status of lots within Tract No. 697, 771 and 790
[14] County of Orange v. Chandler-Sherman Corporation (1976) 54 Cal.App.3d. 561

(9) Conservation Open Space, Planning Area 8B (Harbor Point Park)

Planning Area 8B is 6.1 acres and consists of bluff edge, bluff face areas and rocky beach as the base of the bluff at the Harbor Point promontory which overlooks Dana Point Harbor.

Areas designated Conservation Open Space (CON/OS) are oriented toward habitat preservation and enhancement. The PDD prohibits all uses other than 'public land uses'[15] and hiking trails.

(10) Conservation Open Space, Planning Area 7 (Headlands Conservation Park)

Planning Area 7 contains 24.2 acres and would contain the Headlands portion of the property that consists of bluff top promontory, bluffs and rocky beach. This area contains significant sensitive habitat including coastal sage scrub, southern coastal bluff scrub, California gnatcatcher and Pacific pocket mouse. Improvements within the area would be limited to a bluff top trail, overlooks, seating, and fencing.

The PDD states the area is to be conserved by a non-profit trust and perpetual endowment. Additional information indicates that the endowment will come from the Harry and Grace Steele Foundation (Exhibit 16).

D. INFORMAL REVISED SUBMISSION

Commission staff have, on several occasions, met with the City and landowners to discuss the key substantive issues raised by the proposed LCP amendment. In summary, those key issues include:

- Siting development within ESHA and fuel modification impacts on ESHA
- Siting single family residences in the Strand that rely upon significant geologic remediation/grading and the construction of a 2,100 linear foot long shoreline protective device (i.e. revetment)
- Exclusion of public vehicular access through the Strand to the beach

[15] Chapter 9.75 of the IP/Zoning Code defines "public land uses" as "shall mean land and/or facilities owned, operated and maintained by public agencies for the use and enjoyment of the general public. Typical uses would include, but not be limited to, beaches, parks and open space."

- Over emphasis of exclusive, luxury, overnight visitor accommodations and lack of consideration for the provision of lower cost, overnight visitor accommodations

- Over emphasis on uses considered a lower priority under the Coastal Act, such as residential development

- Notwithstanding Coastal Act prohibitions on shoreline protective devices[16], the absence of lateral public access between the proposed shorefront residences in the Strand and the proposed shoreline protective device

- Notwithstanding Coastal Act prohibitions on shoreline protective devices, the absence of consideration of alternative shoreline protective devices that would minimize the encroachment of such structures onto sandy beach

The above issues raise fundamental questions about the LCP amendment's consistency with Chapter 3 Coastal Act policies including Sections 30240, 30253, 30250, and 30213. Other issues raised by the LCP amendment include, but are not limited to:

- Absence of access to and information about visitor facilities at the Headlands directly from Pacific Coast Highway

- Lack of beach visitor support facilities (e.g. restrooms) at the southern end of Strand Beach

- Lack of direct pedestrian access from the existing County parking lot inland of Planning Area 1 to the proposed Central Strand Beach Access

The City and landowner have countered that the existing certified LCP raises similar issues and that the proposed LCP would significantly reduce any inconsistencies comparing build-out under each plan. The City and landowner have also provided information indicating that there is an existing subdivision of the property (discussed below) and have raised the specter of constitutional/takings issues that may be averted if the current proposal is authorized.

City staff and the landowner have submitted an edited version of the LCP amendment that represents their effort to address some of the issues identified above[17],[18] (Exhibits 6a, 6b, 25). This edited version of the LCPA is not a formal submittal. Accordingly, the edited version of the LCPA has not been subject to local hearings, nor reviewed and approved by the City Council, nor submitted by resolution as is required pursuant to Sections 30510(a) of the Act and 13551 of the Commission's regulations, if the

[16] I.e. Sections 30211, 30213, 30253

[17] City of Dana Point. 2003. Dana Point Local Coastal Program Amendment, No. 2-02. Letter dated August 18, 2003 from Douglas C. Chotkevys, City Manager, City of Dana Point to Deborah Lee, California Coastal Commission.

[18] City of Dana Point. 2003. Revised – The Headlands Development and Conservation Plan. Submittal includes Section 1.0 General Plan Amendment and Local Coastal Program Amendment, Section 3.0 Headlands Planned Development District, Section 4.0 Development Guidelines. Submittal dated August 21, 2003.

Commission is to consider this as a formal request. Rather, the City and landowner have asked Commission staff to consider these edits as 'suggested modifications' made by the Commission pursuant to Sections 30512 and 30513 of the Coastal Act.

In summary, the revisions to the LCPA that the City staff and landowner have made are as follows:

- Reduce impacts to ESHA by shrinking the size of the Upper Headlands Residential area (Planning Area 6) from 26.7 acres to 20.2 acres, adding the difference to the areas designated recreational/conservation open space. Direct impacts to ESHA remain within Planning Area 6, as well as within Planning Areas 4, 8, and 9.

- Provide a 40 bed hostel in Planning Area 4; reduce VRC in Planning Area 4 from 40,000 sq. ft. to 35,000 sq. ft.; increase quantity of allowable luxury accommodation rooms from 65 to 90 within Planning Area 9

- Provide a visitor information center and 6 public parking spaces in Planning Area 4 that will be directly accessible from Pacific Coast Highway

- Provide an 8 foot wide walkway, plus benches along the top of the revetment seaward of the Strand residential area

- If the Strand residential area is allowed to be gated to vehicular access, provide public mechanized access (e.g. funicular) from the County parking lot to the beach along the northern Strand Beach Access walkway

- Provide new Mid-Strand Beach Access stairway from the County parking lot to the Central Strand Beach access.

- Provide restrooms at the south end of Planning Area 1 for beach visitors

Commission staff have indicated to the City and landowner that while the above represent positive changes to the proposed LCP amendment, the changes fail to address the significant adverse effects the plan continues to propose upon ESHA, the potential need to identify an alternative location for the hotel, and the consideration of alternatives relative to shoreline protection in the Strand. Commission staff believe extensive changes to the LUP and IP amendment, both substantive and procedural, beyond those supplied by the City and landowner, are necessary to adequately address ESHA, hazards, visitor serving commercial uses, water quality, public views and public access. Commission staff have presented to the City and landowner the basic concept of the type of plan that would garner a positive staff recommendation. However, the City and landowner have been unsupportive of that plan. Thus, it did not appear prudent to identify the extensive changes, which would necessitate an enormous investment of staff time and resources, with the knowledge that the City intended to

reject them. Thus, Commission staff have chosen to recommend denial of the LCP amendment, without suggested modifications.

E. STATUS OF LAND OWNERSHIP AND SUBDIVISION

According to the City and landowner, the Headlands area that is the subject of this LCP amendment was subdivided under recorded Tract No.'s 697, 771, and 790, in 1924, 1925, and 1926, respectively[19], [20] (Exhibit 2d). Copies of the tract maps were supplied to staff by the landowner, along with evidence of title insurance[21]. The tract maps appear legitimate. The tracts affect the Headlands promontory, hilltop, and bowl areas of the property. In total, the tract maps show approximately 291 lots, typically 40-50 feet wide, and 100 feet long. Public rights-of-way are also shown on the tract maps to access each of these lots. A small number of the lots (less than 20) were sold and developed over time by individuals. The remainder of the lots have remained under the ownership of a single entity, Chandler-Sherman until 1998, and now Headlands Reserve LLC. Although the status of any pre-1929 subdivision is subject to some question, no specific evidence has been supplied to the Commission that would indicate the land owned by Headlands Reserve LLC is not legally subdivided as shown on the above identified tract maps.

The subject LCP amendment also affects the Strand area of the site. Based on the maps supplied by the landowner, this area is divided into 3 large irregularly size lots. Portions of these lots were used as a mobile home park until its closure in 1988.

IV. Summary of Public Participation

The City Planning Commission held a public hearing for the proposed LCP amendment on December 5, 2001, and the City Council held a public hearing for the proposed LCP amendment on January 8, 2002. This LCP amendment request is consistent with the submittal requirements of the Coastal Act and the regulations which govern such proposals (Sections 30501, 30510, 30514 and 30605 of the Coastal Act, and Sections 13551, 13552 and 13553 of the California Code of Regulations).

[19] Headlands Reserve LLC. 2002. City of Dana Point LCP Amendment No. 2-02, Headlands Development and Conservation Plan. Letter dated July 30, 2002 from W. Kevin Darnall, Headlands Reserve LLC to Karl Schwing, California Coastal Commission.
[20] Headlands Reserve LLC. 2002. City of Dana Point LCP Amendment NO. 2-02, Headlands Development and Conservation Plan. Letter dated July 31, 2002 from W. Kevin Darnall, Headlands Reserve LLC to Karl Schwing, California Coastal Commission regarding transmittal of copies of Tracts 697, 771 and 790 with copies of maps attached.
[21] Chicago Title Company. 2002. Policy No. 7300387-M07. Letter from Charles Axen, Chicago Title Company to W. Kevin Darnall, Headlands Reserve LLC regarding ownership and status of lots within Tract No. 697, 771 and 790

V. Findings for Denial of the City Of Dana Point's Land Use Plan Amendment

The Commission hereby finds and declares as follows. The following pages contain the specific findings for denial of the City of Dana Point Land Use Plan Amendment.

A. ENVIRONMENTALLY SENSITIVE HABITAT

Section 30240 of the Coastal Act requires that environmentally sensitive habitat areas be protected against any significant disruption of habitat values and only uses dependent on those resources be allowed within those areas. Section 30240 also requires that development adjacent to environmentally sensitive habitat areas plus parks and recreation areas will be sited and designed to prevent impacts that would significantly degrade those areas and should be compatible with the continuance of those habitat and recreation areas.

Environmentally sensitive habitat areas are defined in Section 30107.5 of the California Coastal Act as follows:

> *"Environmentally sensitive area" means any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.*

1. LOCATION OF ESHA ON THE HEADLANDS SITE

As described more fully in Exhibits 15a and 15b, and incorporated here by reference, the upland ESHA at the Headlands site is defined by the presence of rare vegetation, the presence of special status plant species and the presence of special status wildlife including the presence and habitat required of the Federally threatened California gnatcatcher (Polioptila californica californica) and the Federally endangered Pacific pocket mouse (Perognathus longimembris pacificus).

Fourteen special-status plant species have been identified on the Headlands site over time, as follows: Blochman's dudleya, Coulter's saltbush, Nuttall's scrub oak, Cliff spurge, Vernal barley, California box-thorn, Woolly seablight, Western dichondra, Small flowered microseris, Cliff malocothrix, Palmer's grappling hook, Golden rayed pentacheata, and California groundsel. Not all of these special status plants have been observed during each plant survey. The occurrence of some of these species has been influenced by drought and ongoing impacts from recreational uses. However, at one time or another each of these species has been observed on the site. This serves to illustrate the point that native communities on-site function as habitat for a large suite of

special status species. Floristically, this site is more diverse than sage-scrub found in most locales in the region (Beauchamp 1993). Coastal sites with this much diversity are uncommon (Exhibit 13c). The unusually large number of special status plant species observed on this site over time is an indication of the unique nature of this setting. More rare plants are known from the Dana Point Headlands than from Crystal Cove State Park, which is 20 times the size (Exhibit 13g).

Seven special status wildlife species have been observed on the Headlands property over time, as follows: California gnatcatcher (Federally threatened), Pacific pocket mouse (Federally endangered), Cactus wren (State Species of Concern), Orange throated whiptail (State Species of Concern), San Diego woodrat (State Species of Concern), Coronado skink (State Specie of Concern), White-tailed kite (Fully protected), Quino checkerspot butterfly (Federally endangered). Of particular interest, is the presence of the federally protected California gnatcatcher and Pacific pocket mouse.

Native plant communities on the Headlands site include, CSS, southern coastal bluff scrub, southern mixed chaparral, and disturbed southern needlegrass grassland. In addition there are disturbed areas and ornamental plantings. Four of these plant communities are highly threatened; coastal bluff scrub, Diegan coastal sage scrub, maritime succulent scrub and needlegrass grassland. These habitats are inherently rare and/or perform important ecosystem functions at the Headlands site by providing habitat for two federally listed wildlife species and up to thirteen special status plant species. Furthermore, these habitat areas are easily disturbed and degraded by human activity. As such, these areas constitute ESHA pursuant to the Coastal Act.

Factors determining the location of ESHA include the presence of special status species, gnatcatcher territories, present and historical use of the site by gnatcatchers, and contiguity of habitat. The large contiguous patch of coastal sage scrub on the LCP site as well as the coastal bluff scrub, needlegrass grassland, and maritime succulent scrub are ESHA. In addition, the small patch of CSS adjacent to the northern residential enclave where a breeding pair of gnatcatchers was observed in 1991 and again in 2000 is ESHA. The boundaries of the upland ESHA on the HDCP LCP site are shown in Exhibit 15a.

2. EFFECTS ON ESHA

The proposed LUP amendment eliminates the 1986 LUP and replaces that LUP with the 1996 LUP. Furthermore, under the current proposal, policies would be added to and modified within the 1996 LUP in such a way as would render the LUP inconsistent with Section 30240 of the Coastal Act.

The policies proposed in the LUP that are most directly related to open space and the protection of sensitive upland habitat on the Headlands site are found in the proposed Land Use Element (LUE) and Conservation Open Space Element (COSE) of the LUP, as follows:

New Policies[22]

LUE Policy 5.3: Preserve natural open space within the Headlands, especially along the coastal bluffs, and provide open space areas integrated throughout the development. (Coastal Act/30210-212.5, 30250, 30253)

LUE Policy 5.12: Establish and preserve as public open space, the most unique and significant landforms on the property, which have been incorporated into the Headlands Conservation Park, the Harbor Point Park, the Hilltop Park, and the Strand Beach Park, all as shown on Figure LU-6.

LUE Policy 5.17: Incorporate design elements into private development, such as view lot premiums, which will lower the amount of gross acreage devoted to development, and thus increase the acreage devoted to public recreation, open space, parks and visitor facilities.

LUE Policy 5.25: Comply with the requirements of the Central Coastal Orange County Natural Communities Conservation Plan/Habitat Conservation Plan (NCCP/HCP) approved by the California Department of Fish and Game for the Headlands and avoid duplicative regulatory controls, in particular with respect to wildlife management programs such as the NCCP/HCP. (Coastal Act/30401, 30411)

City-modified 1996 LUP Policies[23] (modifications proposed by the City shown in underline)

COSE Policy 3.1: Environmentally sensitive habitat areas, including important plant communities, wildlife habitats, marine refuge areas, riparian areas, wildlife movement corridors, wetlands, and significant tree stands, such as those generally depicted on Figure COS-1, shall be preserved. Development in areas adjacent to environmentally sensitive habitat areas shall be sited and designed to prevent impacts which would significantly degrade those areas through such methods as, the practice of creative site planning, revegetation, and open space easement/dedications, and shall be compatible with the continuance of those habitat areas. A definitive determination of the existence of environmentally sensitive habitat areas on a specific site shall be made through the coastal development permitting process. <u>For the Headlands, the determination of native habitats will be based on the findings of the NCCP/HCP and compliance with CEQA.</u> (Coastal Act/30230, 30240)

[22] As noted elsewhere, the proposed LUP amendment would replace the 1986 LUP with the 1996 LUP that the Commission certified for the Capistrano Beach and Monarch Beach areas of the City. When the 1996 LUP was certified, certain policies, groups of policies, and narrative that specifically related to portions of the City that were not being updated, were not certified by the Commission at that time. One example are the policies and groups of policies that related to the Headlands. The City's LUP submittal inaccurately presents these policies as existing certified policies in the 1996 LUP that are being changed, whereas, since the Commission never certified these policies, they are actually entirely 'new' to the 1996 LUP.

[23] Portions of these policies were previously certified by the Commission when the 1996 LUP was certified for the Capistrano Beach and Monarch Beach areas. The proposed LUP would certify these policies as applicable to the Headlands and would add the language shown in <u>underline</u> to the policy.

COSE Policy 3.7: Environmentally sensitive habitat areas (ESHA) shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas. For the Headlands, a combination of on-site preservation and compliance with the requirements of the NCCP/HCP shall fulfill ESHA requirements. (Coastal Act/30240)

In the proposed COSE of the LUP, there is also narrative discussing the NCCP/HCP and the landowners participation in that program. A table (COS-4) is also provided in the proposed COSE that describes proposed open space areas and the uses, in general, contemplated in those areas. Finally, the proposed LUE contains drawings depicting the land uses described above.

Proposed COSE Policies 3.1 and 3.7 include language that closely mirrors Section 30240 of the Coastal Act. However, the proposed policies also contain language that would make no allowance for a site-specific determination of the presence of ESHA based on the Coastal Act definition of ESHA. Rather, the findings of the NCCP/HCP relative to the habitat on the project site –which are not based on Coastal Act standards- would be used for a "determination of native habitats". It should be noted that the meaning of the phrase "determination of native habitats" within the proposed policies is ambiguous in at least two ways: (1) since the NCCP/HCP does not purport to identify ESHA for purposes of compliance with the Coastal Act, it's unclear what it means to simply refer to the findings of the NCCP/HCP as if it lists ESHA; and (2) in both proposed COSE Policies 3.1 and 3.7 the first sentence discusses protecting ESHA but then the policy goes on to discuss the identification of "native habitats", however, neither of the policies states either the relevance of native habitat or how it will define "ESHA". For purposes of this analysis, the Commission has interpreted this proposed policy language to mean that the areas on the Headlands site identified as sensitive in the NCCP/HCP is the ESHA and that this sensitive habitat and any other habitat on the site may be impacted in the manner allowed in the NCCP/HCP.

The NCCP/HCP findings[24] recognize the presence of native habitat and the variety of sensitive plant and animal species found on the Headlands site and state that the site was considered for inclusion within the NCCP/HCP reserve system due to the presence of this habitat (Exhibits 11a, 11b). However, according to the NCCP/HCP and findings supporting the adoption of the NCCP/HCP (Exhibit 11a, 11b), the site was not included in the NCCP/HCP reserve system because 1) it was isolated from other elements of the Reserve System; 2) due to it's isolation from the other elements of the Reserve System the site would not provide any biological connectivity function for the Reserve System; 3) the small size of the site in combination with existing disturbance "make it a poor candidate for long-term management and maintenance of existing biological values"; 4) the high cost of trying to include the site in the Reserve System; and 5) the site does not

[24] U.S. Fish & Wildlife Service and California Department of Fish and Game, et.al. 1996. Findings and Facts in Support of Findings Regarding the Central and Coastal Subregion Natural Community Conservation Plan/Habitat Conservation Plan Joint Programmatic Environmental Impact Report No. 553 (SCH No. 93071061) and Draft Environmental Impact Statement 95-59. Exhibit A dated April 9, 1996.

meet the requirements established in the NCCP/HCP reserve design guidelines for inclusion of a site within the reserve. The criteria used in the NCCP/HCP to determine whether a site should be included in the NCCP/HCP Reserve System are not the same criteria used to identify ESHA under the Coastal Act. Thus, even though the USFWS and CDFG found that the site doesn't qualify to be included in the NCCP/HCP Reserve, doesn't mean that habitat on the Headlands site doesn't qualify as ESHA. As described above and in Exhibits 15a, and 15b, there is habitat on the Headlands site that qualifies as ESHA under the Coastal Act. In order for the analysis required to be undertaken in the LUP policies to comply with the Coastal Act, that analysis would need to consider all the standards which apply when making a determination of ESHA. Proposed COSE Policies 3.1 and 3.7 fail to utilize the Coastal Act definition of ESHA. Thus the policies are inconsistent with Sections 30240 and 30107.5 of the Coastal Act.

Using Coastal Act standards for determining ESHA, the project site contains approximately 50.3 acres of ESHA (Exhibit 15a). As described above, the LUP would designate 26.7 acres of land within the bowl area of the site for residential land use, another 4.4 acres of land would be designated for visitor/recreation commercial, and another 16.6 acres of land would be designated for recreation open space. The boundaries of these land use areas overlap the boundaries of the ESHA identified by the Commission (Exhibit 15c). The uses authorized by the LUP in these areas would allow grading and clearing vegetation; the construction of residential and commercial structures and appurtenances; roads, utilities and other infrastructure; and thinning and clearing native vegetation for fuel modification purposes, among other development. These uses would significantly disrupt habitat values and would not be uses dependent on the resources. Thus, the uses allowed under the LUP would be inconsistent with Section 30240 of the Coastal Act.

COSE Policies 3.1 and 3.7 would allow impacts upon ESHA on-site, and then allow the impacts to the ESHA to be mitigated either on-site or off-site by the landowners participation in the NCCP/HCP. Section 30240 of the Coastal Act does not provide for such measures in lieu of protecting existing ESHA resources. A recent Court of Appeal decision [Bolsa Chica Land Trust v. Superior Court, 71 Cal. App. 4th 493, 83 Cal Rptr. 2d 850 (1999)] speaks to the issue of mitigating the removal of ESHA through development by "creating" new habitat areas elsewhere. This case was regarding a Commission action approving an LCP for the Bolsa Chica area in Orange County. The Commission determined that a eucalyptus grove that serves as roosting habitat for raptors qualified as ESHA within the meaning of Section 30107.5 of the Coastal Act. The Commission found that residential development was permissible within the ESHA under Section 30240 because the eucalyptus grove was found to be in decline and because the LCP required an alternate raptor habitat be developed in a different area.

In the decision, the Court held the following:

> *The Coastal Act does not permit destruction of an environmentally sensitive habitat area [ESHA] simply because the destruction is mitigated offsite. At the very least, there must be some showing that the destruction is needed to serve some other environmental or economic interest recognized by the act.* 83 Cal.Rptr.2d at 853.

The Court also said:

> *[T]he language of section 30240 does not permit a process by which the habitat values of an ESHA can be isolated and then recreated in another location. Rather, a literal reading of the statute protects the area of an ESHA from uses which threaten the habitat values which exist in the ESHA. Importantly, while the obvious goal of section 30240 is to protect habitat values, the express terms of the statute do not provide that protection by treating those values as intangibles which can be moved from place to place to suit the needs of development. Rather, the terms of the statute protect habitat values by placing strict limits carefully controlling the manner uses in the area around the ESHA are developed.* 83 Cal.Rptr. 2d at 858.

Thus, the requirements of Section 30240 of the Coastal Act cannot be met by destroying, removing or significantly disrupting an ESHA and attempting to create, restore or preserve commensurate habitat elsewhere. In order to protect ESHA, neither grading, nor construction of houses, commercial structures, roads, public facilities or fuel modification could occur within the habitat. However, the proposed LUP would allow the ESHA on the Headlands site to be partially destroyed for just these purposes. The proposed policies are therefore inconsistent with Chapter 3 of the Coastal Act and cannot be approved.

The court's statement that "[a]t the very least, there must be some showing that the destruction is needed to serve some other environmental or economic interest recognized by the act" is a reference to a balancing approach that will be discussed separately below (see Section V.G.). Suffice it to say that there is no overriding Chapter 3 resource protection policy advanced by the current proposal that would authorize the construction of houses, commercial development, or roads in the coastal zone or the establishment of fuel modification zones within sensitive habitat. Furthermore, any benefits that are provided by this project could be achieved without the destruction of ESHA, as there are alternative locations for the hotel and public facilities that would not result in impacts to ESHA.

In sum, the proposed LUP cannot be approved as submitted because it authorizes the destruction of ESHA on the Headlands site, in violation of Section 30240 of the Coastal Act as interpreted by the Court of Appeal in Bolsa Chica.

3. ESHA BUFFERS

The development that is contemplated in the proposed LUP for the Headlands will bring with it significant threats to the integrity and continued functioning of the ESHA that is currently present. Section 30240 of the Coastal Act requires that development adjacent to ESHA be sited and designed to prevent impacts that would significantly degrade those areas, and shall be compatible with the continuance of those habitat areas. Buffers and development setbacks protect biological productivity by providing the horizontal spatial separation necessary to preserve habitat values and transitional terrestrial habitat area. Furthermore, buffers may sometimes allow limited human use such as low-impact recreation, and minor development such as trails, fences and similar recreational appurtenances when it will not significantly affect resource values. Buffer areas are not in themselves a part of the environmentally sensitive habitat area to be protected. Spatial separation minimizes the adverse effects of human use and urban development on wildlife habitat value through physical partitioning. The greater the spatial separation, the greater the protection afforded the biological values that are at risk. Buffers may also provide ecological functions essential for species in the ESHA.

Typically, buffers are identified by a certain distance between the resource to be protected and development activities that are prohibited (e.g. 50 foot wide buffer between ESHA and the limits of grading for development). The proposed LUP contains policies that contain language corollary to Section 30240(b) of the Coastal Act. However, the proposed LUP policies place limitations on the application of that policy to the Headlands. In addition, the LUP makes reference to certain 'greenbelt buffers' that are to be located between the habitat that is proposed to be conserved (i.e. the Headlands Conservation Park) and other development areas. However, the LUP does not identify specific buffer standards or widths with which development must conform. Furthermore, the LUP identifies the types of uses authorized within the 'greenbelt buffer', as public trails, open space parking, visitor recreational facilities, seating, signage, fuel modification, landscape features, security fencing, public roads necessary to access open space areas. Some of these uses, such as trails, signs, and seating, if sited properly, such as at the outer edge of the buffer away from the ESHA, would be allowable within a buffer. However, other uses, such as buildings, parking lots, roads, and other more intense uses are generally inappropriate within habitat buffers. In order for the Commission to find an LUP consistent with Section 30240(b) of the Coastal Act, the LUP must contain policies that establish appropriate minimum buffers between ESHA and development areas and identify the uses that would be allowed within those buffers, excluding inappropriate uses.

More specifically, in this case, the Commission finds that the LUP needs to contain policies that implement a minimum 50 foot wide buffer between all areas designated as ESHA and development. Furthermore, where there is an interface between ESHA and intense urban uses, such as residential or commercial development, the outer edge of the habitat buffer should be delineated with a fence that is impervious to dogs. Adjacent to new residential areas, the fence should be constructed of block material with no openings and be at least 6 feet high. Within the buffers all exotic vegetation should be

removed and appropriate native species reestablished. Such fenced buffers will inhibit incursions by people and pets, inhibit the spread of ornamental vegetation, and reduce the intensity of noise, visual stimuli, and light pollution.

Despite the above precautions, the increased human presence will have negative effects on coastal resources. To mitigate those effects, the Commission would require that existing degraded ESHA be restored and that a habitat management plan be completed and funded in perpetuity. This will provide a vehicle for public education, informative signs, weed control, trail maintenance, and on-going needs for repair and restoration.

4. RELATIONSHIP BETWEEN CURRENT PROPOSAL, THE EXISTING LCP, AND THE EXISTING SUBDIVISION

The City and landowner have presented their view that the proposed LCP amendment is, on balance, more protective of coastal resources than the existing LCP that pertains to 95.1 acres of the 121.3 acre site. The City and landowner have argued that full build-out under the existing LCP would result in up to 310 single family residences, hotels, commercial structures and other development within areas that under the proposed LCP would be at least partially conserved in either recreation or conservation oriented open space. Furthermore, the City and landowner have argued that the existing LCP fails to identify any ESHA on the project site, and in fact, makes an affirmative determination that the habitat is not ESHA. The City and landowner base this assertion, in part, on non-policy narrative which discusses the general state of coastal sage scrub habitat in the Dana Point area. Specifically, that non-policy narrative states "[t]he Dana Point area contains a mix of native and introduced biotic communities including riparian, coastal sage scrub, and ruderal communities which do not fit into the Coastal Act definition of environmentally sensitive habitat areas.[25]"(Exhibit 3b) The City and landowner also refer to subsequent narrative which states that the regional significance of several coastal strand species found in areas of exposed sand on in the Headlands area is questionable. The City and landowner have argued that the existing LCP affords little protection to existing on-site habitat, and endorses off-site mitigation for impacts to sensitive habitat. The City and landowner have argued that language within the LCP that refers to a mitigation plan suggests that the LCP contemplates impacts to ESHA by development such as houses and commercial structures, and allows those impacts to be mitigated, including off-site mitigation.

The Commission has reviewed and given consideration to the City and landowners arguments regarding the existing versus proposed LCP. Although the City and landowner have raised valid concerns relative to the LCP, the Commission disagrees with the characterization that the existing LCP makes an affirmative determination that

[25] Orange County Environmental Management Agency. 1986. Local Coastal Program, South Coast Planning Unit, Dana Point, Volume 3. Section II.B.2.a., pages 5-6.

the site contains no ESHA. The narrative to which the City and landowner refer is background information discussing the general understanding at the time about the overall habitat mix in the Dana Point area. This is not a specific discussion about the habitat on the subject site or at any given area within the greater Dana Point area. In fact, the LCP contains specific LUP policies, most notably Policy 18, which mandate a site-specific analysis for the identification of any rare, endangered, threatened or especially valuable species and their habitats on a given site at the time of a permit application. The IP (see Policy G.2.L.) contains further details regarding this requirement (Exhibit 3b). The Commission's findings adopting the existing LCP[26] (Exhibit 3c) make clear there was information suggesting that habitat at the Headlands site could qualify as ESHA, but that additional surveys and analysis was necessary to make the determination[27]. Furthermore, the Commission disagrees with the contention that there are no provisions in the existing LCP that would prevent impacts on sensitive habitat. The existing LCP contains policies that substantially conform with the requirements of Section 30240 and in fact directly reference that Coastal Act policy (see LUP Policies 1, 2, 3, 4, 7, 8, 10, 11, 13, 14, and 18, and IP Policy G.2.L.). Thus, there are policies in the existing LCP that could be relied upon to both identify ESHA and protect those areas from development that would disturb the ESHA.

Furthermore, the Commission disagrees with the City and landowners assertion that the reference to 'mitigation' within the existing LCPs policies suggests that impacts for residential, commercial or other development upon ESHA are authorized provided that such impacts are mitigated. The intent of the language regarding 'mitigation' is stated clearly in the Commission's findings relative to approval of the existing LCP (Exhibit 3c). First, Part II of those findings states the intent of the policies is to implement the mandatory protections identified in Section 30240(a) of the Coastal Act and limits the uses within ESHA to those dependent upon the resource. The concept of mitigation is limited to mitigation to offset impacts to ESHA that are produced by uses that are dependent upon the resource and don't significantly disrupt habitat values, and which are therefore allowed. For instance, the Commission has found that construction of nature trails are uses dependent on the resource. Nonetheless, the construction of a nature trail may cause impacts that would need to be mitigated. Whereas, development such as houses, a hotel or commercial development are not resource dependent uses, and thus would not be allowed within ESHA. Since such uses are prohibited, the impact wouldn't be allowed and the need for mitigation would be moot. Second, Part IV of those findings reaffirms that "[t]he objective of the Commission's suggested modification for the Headlands sector is to protect environmentally sensitive habitat areas consistent with Coastal Act Section 30240". The findings describe the concept of identifying the location of ESHA and then expanding open space areas to capture and preserve these sensitive habitat areas, at the time a coastal development permit is sought. The

[26] California Coastal Commission. 1985. County of Orange, Resubmittal of Dana Point Local Coastal Program for Public Hearing and Commission Action at the meeting of October 22, 1985, that fully incorporate by reference the findings dated December 23, 1983 regarding County of Orange, Resubmittal of Dana Point Local Coastal Program for possible Commission action at the meeting of January 10-13, 1984, as described in the meeting notice.

[27] In any event, the standard for the Commission's review of the proposed LCP amendment in this respect is whether it accurately characterizes the ESHA that exists on the ground at the present time, not whether it is more or less protective than the existing system. Thus, even if the existing LCP were to state unequivocally that this area contained no ESHA, that would not alter the task before the Commission. The question before the Commission is whether, as an empirical fact, the area is ESHA.

findings specifically contemplate reconfiguring the land uses identified in the LCP so that resources are protected from impacts, not impacted and then mitigated. The concept of transplantation is also discussed in the findings, but this is in the context of situations where transplantation is necessary in order to both save the habitat and address an unavoidable hazard (such as a collapsing cliff), or as a means of creating or enhancing habitat elsewhere provided that such transplantation does not significantly disrupt the habitat at the donor site[28].

The City and landowner have also pointed out the presence of an existing subdivision of the property that carves the Headlands site into about 300 lots. The City has expressed concern regarding the potential that the bulk of these lots –which are presently commonly owned by a single entity- could be sold and developed in fragments[29] (Exhibit 18a). Furthermore, the City expresses concern about the potential for inverse condemnation actions in association with these lots.

The Commission recognizes the landowners rights to some economic use of their property. However, while no evidence has been submitted to the Commission that would call into question the legality of the existing subdivision, there is also no evidence that the landowner has perfected their right to develop each lot (see, e.g., District Intown Properties v. District of Columbia, 198 F.3d 874 (D.C. Cir. 1999). It is also notable that the existing LCP does not mention or recognize any existing subdivision on the property. There is no recognizable correlation between the existing lot configuration and the land use areas designated in the existing LCP. In fact, many of the small parcels created by the existing subdivision are designated for use as conservation or other open space under the existing LCP. Furthermore, the landowner would need to reconfigure lots to create a functional residential development and consolidate many of the small parcels into larger parcels in order to reasonably develop that land for the hotel and commercial uses that are designated under the existing LCP. Based on the historic level of community concern over the importance of the Headlands as a resource in Dana Point, it can be reasonably anticipated that the process of obtaining entitlements based on the existing subdivision at the local level (and the State level if appealed) would, at a minimum, be arduous. Nevertheless, barring the surfacing of information that would call the legality of the lots into question, the Commission would recognize that the landowner does have at least some legally recognizable right to an economic use of its property at the permitting stage. Thus, the existing subdivision represents an interest –albeit of uncertain value- that the Commission should consider and weigh in its decision regarding the present LCP proposal and any alternative development plans for the site. Moreover, as the courts have held, the LCP is not the point in the regulatory process when taking arise. Sierra Club v. California Coastal Commission (1993), 12 Cal. App. 4th 602. While takings concerns need not be ignored, they are more properly addressed at the permitting stage. See Cal. Pub. Res. Code § 30010.

[28] Of course, as is indicated above, the relative degree of protection provided by the proposed LCP amendment versus the existing LCP is not the standard for the Commission's review of this proposal in any event. The Commission's review of the current proposal is based on the standards established by the policies in Chapter 3 of the Coastal Act.

[29] Rutan & Tucker. 2003. Dana Point Local Coastal Program Amendment. Letter dated August 19, 2003 from A. Patrick Munoz, City Attorney, City of Dana Point, to Deborah Lee, Deputy Director, California Coastal Commission.

5. RELATIONSHIP BETWEEN ESHA AND NCCP/HCP

The landowner has challenged Commission staff on its determination that the Headlands site contains ESHA. The landowner's primary arguments were set forth most formally in an August 11, 2003 letter from the landowner's counsel.[30] (Exhibit 18b). That letter raises several issues to which the Commission hereby responds. Most of the issues relate to the NCCP/HCP discussed above, in section III.C.1.d. As indicated above, that plan allows development to impact up to 30 acres of coastal sage scrub habitat on the land at issue in this action. It is against this background that the landowner makes the following arguments.

Citing Sections 30401 and 30411 of the Coastal Act, the landowner asserts that the Commission's identification of ESHA on the project site runs counter to state law in two respects. Because Section 30411(a) recognizes the Department of Fish and Game (CDFG) and the Fish and Game Commission as " the principal state agencies responsible for the establishment and control of wildlife and fishery management programs," the landowner asserts that the Commission must defer to CDFG's conclusion that the Headlands habitat is "of low biological significance."[31] However, this is wrong for three reasons. First, there is no declaration in the findings[32] for the NCCP/HCP that the Headlands habitat is of low biological significance as is suggested by the landowner. Contrarily, the findings state the site was considered for inclusion in the reserve system due to the variety of sensitive plant and animal species that are found on the site. Rather, those findings state that the Headlands site is not a viable candidate for inclusion in the NCCP/HCP Reserve System (Exhibit 11a, 11b) largely because of its isolation from the other components of the Reserve System and the difficulty and expense of adequately managing the area as a component of the Reserve System. Furthermore, as is indicated in Exhibit 15a , the NCCP/HCP's failure to include the subject area as part of the NCCP/HCP Reserve System does not mean that CDFG found the area to be of low biological significance. The very essence of such plans is to decide which of many ecologically valuable areas are the most important ones in accomplishing the goals of the plan. Moreover, those goals are related to protecting certain target species and communities from extinction.[33] Thus, the decision is inherently focused on a narrower subject-matter than the Commission's ESHA analysis (which looks at all rare and especially valuable species and habitats rather than just target ones)[34] and on a narrower goal than the Commission's charge under Section

[30] Sheppard Mullin Richter & Hampton. 2003. Headlands Reserve LLC Project, LCP Amendment (2-02) to Dana Point LCP, City of Dana Point, California. Letter dated August 11, 2003, from Joseph E. Petrillo, Sheppard Mullin Richter & Hampton to Ralph Faust, California Coastal Commission.
[31] Letter at 3.
[32] U.S. Fish & Wildlife Service and California Department of Fish and Game, et.al. 1996. Findings and Facts in Support of Findings Regarding the Central and Coastal Subregion Natural Community Conservation Plan/Habitat Conservation Plan Joint Programmatic Environmental Impact Report No. 553 (SCH No. 93071061) and Draft Environmental Impact Statement 95-59. Exhibit A dated April 9, 1996.
[33] See NCCP/HCP, Part I, § A.3.c.
[34] One example of where these two approaches diverge is Coulter's saltbush, a rare plant listed on CNPS list 1B, which was used by the Commission as one indication of ESHA, but which appears not to have been covered by the NCCP. See NCCP/HCP § 4.5.1, Table 4-8.

30240 (to protect all ESHA against significant disruption of habitat values and prohibit non-resource-dependent uses in any such area, rather than just the “most important” ones). Second, even if the NCCP/HCP had implied a conclusion by CDFG that the area was not ecologically valuable, that assessment would be pursuant to a different standard from the Commission's standard for identifying ESHA. Indeed, the Coastal Act definition of ESHA requires designation of “rare” as well as valuable species and habitats. In any event, the Commission is statutorily obligated to make its own determination under its own standard, as established by the Coastal Act, and while it can take into account information and opinions expressed by CDFG, the Commission must look at all of the relevant information and come to its own conclusion.[35]

The other respect in which the landowner claims the Commission's ESHA identification runs contrary to state law flows from the necessary consequences of that ESHA identification. Once ESHA has been identified, Section 30240 of the Coastal Act requires that the ESHA be protected and that only uses dependent on the ESHA resources be allowed within the area. Consequently, the landowner argues that the very identification of ESHA imposes controls that constitute a ‘wildlife management strategy.’ Section 30411(a) of the Coastal Act prohibits the Commission from establishing or imposing any “controls” with respect to "wildlife and fishery management programs . . . that duplicate or exceed regulatory controls established by [CDFG, among others]." Neither the identification of ESHA nor the development restrictions that flow from that identification, both of which are the responsibility of the Commission under the Coastal Act, and no other agency, constitute the imposition of controls on, or the implementation of, wildlife or fishery management programs within the meaning of Section 30411 of the Coastal Act. Indeed, the Commission has consistently read and applied Section 30411 not to apply to the Commission’s basic role in carrying out the land use policies in Chapter 3 of the Coastal Act.

More generally, the landowner's argument is based on the false assumption that the subject of CDFG's regulatory authority and the subject of the Commission's regulatory authority are one and the same. Thus, they conclude, any regulation by the Commission of an area already subject to CDFG's regulation via an NCCP must be duplicative. In fact, the two agencies have complementary roles, with distinct regulatory foci. CDFG enters into natural communities conservation plans (“NCCPs”) pursuant to the Natural Community Conservation Planning Act[36] (“NCCP Act”) and its authority under the California Endangered Species Act.[37] While CDFG's focus in entering into NCCPs is on the management of endangered species, the Commission’s separate and unique regulatory focus is the use and development of land and the impacts thereof on a whole host of coastal resources. This distinction is made clear by focusing on any one of the many Chapter 3 policies *other than* section 30240. The Commission can and

[35] The prior Commission actions that the landowner's counsel cites in footnote six of the letter are inapplicable. In the case of the first one (permit number 6-98-127), the letter cites a February 28, 2002 staff report that did not even go to the Commission. That report was modified, and it was only the revised version that was presented to the Commission. The revised approach, approved by the Commission in May of 2002, relied on other factors in concluding that an area was not ESHA.
[36] Cal. Fish & Game Code §§ 2800 *et seq.* (see, specifically, section 2810).
[37] Cal. Fish & Game Code §§ 2050 *et seq.*

must regulate development in this area on the basis of its impact on any of the coastal resources the Commission is charged with protecting.

The landowner next argues that the NCCP/HCP is binding on the Commission because the chief of the California Resources Agency, the Secretary of Resources, was a signatory to the NCCP/HCP Implementing Agreement, and the Commission is part of the Resources Agency. However, this argument fails for a whole host of reasons, ranging from the statutory language and purpose of the NCCP Act to the very text of the Implementing Agreement itself. To begin with, it is notable that three Resources Agency departments (CDFG, the Department of Forestry, and the Department of Parks & Recreation) are all parties to the agreement. If, as the landowner argues, every department within the Resources Agency were automatically bound by the Resources Agency's execution of the Implementing Agreement, there would have been no reason for these three departments to be signatories to the agreement. Moreover, the statutory scheme explicitly states that the planning agreement, at least, is only binding on agencies that are a party to it[38]. It is also notable that the phrase "assurances policy" is defined as certainty for private landowners "in [Endangered Species Act] Habitat Conservation Planning" - not all planning-related review of development in the subject area generally. Furthermore, the findings of the agreement state that the U.S. Fish and Wildlife Service ("USFWS") and CDFG find that the agreement "meets the requirements for a habitat conservation plan for purposes of [the state and federal Endangered Species Acts] and the NCCP Act," without any reference to other statutory or regulatory schemes. Finally, Section 8 of the agreement (on mutual assurances) specifically lists commitments made by "County and Cities" (section 8.1), Participating Landowners (section 8.2), USFWS (section 8.3), CDFG (section 8.4), and CDF (section 8.5), and then says, in section 8.6, that the parties "acknowledge that the Participating Landowners may also be subject to permit requirements of agencies not parties to this Agreement." All of the above factors demonstrate that 1) the Commission was not a signatory to the NCCP/HCP; 2) the Commission is not bound by the NCCP/HCP Implementation Agreement simply because the Resources Agency was a signatory to the agreement; and 3) the NCCP/HCP is only designed to carry out the requirements of the NCCP Act and Endangered Species Act requirements, and not the Coastal Act[39], and thus, that Section 30411 is not applicable here.

The landowner also points to Government Code Section 12805.1's requirement that the Secretary of Resources facilitate coordination between CDFG and the Commission. The landowner cites this provision as evidence that her signature on the Implementing Agreement must be assumed to reflect an incorporation of the Commission's role. This argument turns Section 12805.1 on its head. Section 12805.1 was adopted to facilitate

[38] Cal. Fish & Game Code § 2810(b)(1)

[39] The landowner also argues that the Commission is estopped from designating ESHA on the site based on a 1996 letter from the Commission's South Coast District Director commenting on the proposed NCCP/HCP. Letter from Chuck Damm to Gary Medeiros, Orange County Environmental Management Agency (Jan. 29, 1996). The Commission is not bound by these statements made in this letter, which are, in any event, general statements, see, e.g., page 2 ("Generally speaking, therefore, the NCCP/HCP fulfills [the] two criteria [of Section 30240])", and explicitly non-committal. See, e.g., page 3 ("However, in some cases the HCCP process may be more liberal than the Coastal Act because it would allow development in some areas that qualify as ESHA"); page 5 ("Any plans required by the NCCP/HCP to implement the provisions of the Adaptive Management Program may have to be submitted as amendments to the certified LCPs").

such coordination specifically in order to clarify the complementary roles of the two agencies. It was adopted as an *alternative* to a separate proposal that would have curtailed the Commission's authority under Section 30240 of the Coastal Act based on CDFG's actions. The Legislature's rejection of that other bill, and the subsequent failure of the formal attempts at mediating a coordinated approach pursuant to Section 12805.1,[40] left the Commission's 30240 authority fully in tact and unimpaired by CDFG's actions pursuant to the NCCP law.

The underlying principle in all of the above is that the NCCP/HCP process was never intended to, and does not, supplant the Commission's regulatory authority over land use and development. This is clear from numerous disclaimers and references in guidelines and agreements applicable to NCCPs and HCPs. For example, the Habitat Conservation Planning Handbook adopted in 1996 by the USFWS and the National Marine Fisheries Service specifically states in its "Helpful Hints" section (pages 1-17) that the "activities addressed under an HCP may be subject to federal laws other than the ESA, such as the Coastal Zone Management Act. . . . Service staff should check the requirements of these statutes and ensure that Service responsibilities under these laws, if any, are satisfied, and that the applicant is notified of these other requirements from the beginning." Similarly, the California Resources Agency's 1993 NCCP Process Guidelines state that "A variety of state and federal laws may apply to the area subject to a subregional NCCP. Inasmuch as any other law affects land planning an conservation issues, it is desirable that the NCCP anticipate these requirements so as to minimize conflicting purposes. . .". Indeed, the very purpose of legislation such as the federal Coastal Zone Management Act and the California Coastal Act is to provide heightened protection for areas of special significance, beyond that which may be provided by legislation of more general geographic scope.

None of this is to say that the Commission does not respect the NCCP/HCP process or that it does not take into account the information and analyses presented by CDFG or other resource agencies. The Commission has made concerted efforts to integrate its role with these important programs and has repeatedly indicated that the most effective and meaningful way to do so is for the Commission to be involved in the development of NCCPs and HCPs so that NCCP-related provisions can be integrated into LCPs in a coordinated planning process.

Finally, independent of the NCCP/HCP issues, the landowner asserts that the habitat on the Headlands site simply does not meet the definition of ESHA under the Coastal Act. The Commission disagrees with the landowners assertions and –as elsewhere- incorporates herein by reference the response to this assertion provided in Exhibits 15a and 15b. The Commission wishes to place particular emphasis on three points made in that memorandum (Exhibit 15a). First, the Commission's determination of whether any given areas constitutes ESHA under the Coastal Act is based on the totality of evidence it receives, and is always based on site-specific analyses and recommendations made

[40] It is also notable that this NCCP/HCP predated the entire mediation process. The Secretary obviously did not believe that her signature on the Implementation Agreements bound the Commission at that time. If she did, she would not have needed to initiate the mediation to work out a means of involving the Commission in future NCCPs.

by its staff. Accordingly, in this instance, as in all instances, the Commission's decision to delineating the area listed in Exhibits 13a and 13b as ESHA is not based solely on the presence of coastal sage scrub in the area. Secondly, although the Commission considers the functionality of habitat in determining whether an area constitutes ESHA, it does not consider the concept of viability in the sense put forth by the applicant (i.e., likelihood of long-term survival) as a factor that is directly relevant to the Commission's delineation. Accordingly, in this instance, the Commission's delineation is based on its assessment of the ability of the species and habitat in the delineated areas to function effectively and thereby to serve an especially valuable role in the ecosystem. Finally, the Commission delineates ESHA based on the statutory definition in Section 30107.5 Nothing in that provision allows the Commission to exclude an area from classification as ESHA simply because it has suffered significant disturbance and/or degradation. As long as the area meets the other criteria in that definition and remains susceptible of being easily disturbed or degraded beyond its current level of disturbance or degradation, the area can and will be delineated as ESHA.

6. OTHER ESHA ISSUES

As noted above, the Headlands site is affected by an existing subdivision that created lots that are located partly or wholly within ESHA. The City and landowner have argued that the proposed LCP would eliminate adverse impacts to sensitive habitat by designating significant areas of sensitive land within the Headlands area as open space. However, the designation of open space may not be an adequate means of assuring that the lots within those designated areas will be preserved in perpetuity as open space. The owner of any lot within the area designated open space could assert a takings claim if some type of development is not authorized on that lot. If development were to occur, it would cause significant adverse impacts upon ESHA. Other impacts from developing each lot would also occur, including significant visual impacts. In order to minimize or avoid this situation, the LUP must contain provisions for a lot retirement program, such as a Transfer of Development Credit (TDC) Program and reversion to acreage process, that would allow subdivision and more intense development of non-ESHA areas, such as the more level areas of the bowl and the Strand, in exchange for retiring any existing development rights upon those lots that partly or wholly contain ESHA. The LUP contains no such program, thus, the LCP does not achieve the purported ESHA protection program. Thus, the Commission finds the proposed LUP cannot be found consistent with Section 30240 of the Coastal Act.

7. ANALYSIS OF REVISED INFORMAL SUBMITTAL

The City staff has submitted some proposed changes to the LUP that respond, in part, to the issues raised above[41]. Most notably, the proposal reduces the 26.7 acre residential area that overlaps ESHA to 20.2 acres, and it places the remainder acreage into the areas designated recreation open space (Exhibit 6b). Nevertheless, the 20.2 acres of residential area would still overlap ESHA. Furthermore, the LUP places no

[41] Although these changes are not formally submitted, the Commission provides this guidance in response to the submittal in order to clarify the Coastal Act's requirements for an approvable program

prohibitions on fuel modification within ESHA. Since the remaining 20.2 acres of residential would be located immediately adjacent to potentially flammable habitat area, fuel modification would be necessary to reduce fuel loads to protect the new residential structures from fire hazards. Fuel modification would necessitate clearing and thinning vegetation, which are activities that would disturb the habitat and degrade the ESHA. In addition, no changes are made to the siting or configuration of the commercial areas. Thus, commercial retail and hotel uses would still be allowed by the proposed LUP within ESHA. Finally, no changes were made to the types of uses contemplated in the hilltop and harbor point promontory areas. Roads, parking lots, community structures such as a lighthouse, among other development, could still be constructed within ESHA under the proposed LUP. Construction and operation of these uses within the ESHA would remove or degrade the ESHA. Therefore, additional changes to the LUP, beyond those identified by the City, are necessary in order for the Commission to find the LUP consistent with Section 30240 of the Coastal Act.

B. HAZARDS

The principal Coastal Act policy relative to Hazards is Section 30253. Another applicable policy is Section 30235 of the Coastal Act. These policies along with other applicable policies will be used to evaluate the conformance of the LCPA with the Coastal Act. Section 30253 of the Coastal Act mandates that development minimize risks to life and property in areas of high geologic, flood, and fire hazard. It also requires that development assure stability and structural integrity and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding areas, or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs or cliffs. Section 30235 requires the Commission to permit the construction of protective devices to serve coastal dependent uses, to protect existing structures, and to protect existing beaches in danger of erosion, despite the conflict that such construction might present with other Coastal Act policies; however, Section 30235 limits its mandate to the three instances listed above and even then to situations in which the project is designed to eliminate or mitigate adverse impacts on local shoreline sand supply and where there are existing structures in danger from erosion.

The proposed LUP would allow the development of approximately 50 lots for private custom homes in a depression (“the Bowl”) area, and now containing a greenhouse and nursery; and approximately 75 lots for private custom homes on a sloping site consisting of an ancient landslide complex above Strand Beach and previously occupied by a trailer park. Approximately 2.2 million cubic yards of grading would be required to implement the development contemplated. The majority of the grading would take the form of the removal of about one million cubic yards of material from the upper portion of the landslide complex above Strand Beach, the removal and re-compaction of 33,000 cubic yards of material in the lower portion of this landslide complex, and the addition of approximately one million cubic yards of fill to the Bowl area. Together, this grading is proposed in order to accomplish two main purposes: it would balance the landslide forces to yield acceptable factors of safety against sliding for the Strand, allowing

development there, and it would elevate building pads in the Bowl to provide better coastal views from the development that would be allowed to be constructed there. To protect the development of the Strand area, and as part of the stabilization plan for the ancient landslide complex, the LUP would allow the rebuilding and enlargement of an existing approximately 2,240 foot long revetment that extends nearly the length of Strand Beach, and is contiguous with several thousand feet of revetment protecting development upcoast of the Headlands area.

In order to allow for this type of development, the proposed LUP amendment includes the following policies:

> COSE Policy 2.8: Minimize risks to life and property, and preserve the natural environment, by siting and clustering new development away from areas which have physical constraints associated with steep topography and unstable slopes; and where such areas are designated as Recreation/Open Space or include bluffs, beaches, or wetlands, exclude such areas from the calculation of net acreage available for determining development intensity or density potential. For the Headlands, minimization of risk to life and property and preservation of the natural environment is met by a requirement that new development be sited and clustered into areas determined by geological feasibility studies to be suitable, such as by remediation of unstable slopes impacted by such new development. (Coastal Act/30233, 30253)
>
> COSE Policy 2.14: Shoreline or ocean protective devices such as revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, and other such construction that alters shoreline processes shall be permitted when required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion, and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply and minimize adverse impacts on public use of sandy beach areas. For the Headlands, the potential for coastal slope erosion shall be minimized and public safety and coastal access protected by reconstruction of the existing revetment. Such reconstruction must not encroach seaward of the toe of the existing revetment at bedrock unless improvements are necessary to create or enhance new public access and/or public safety. (Coastal Act/30210-12, 30235)

The proposed policies would explicitly allow the reconstruction of a shoreline protective device along the Strand without any analysis of the negative impacts of the device or a showing that the device is necessary to serve the purposes listed in Section 30235. Furthermore, COSE Policy 2.8 is designed to allow the construction of homes along the Strand, relying on that rebuilt revetment, even though it would be new development that required the construction of the revetment, in violation of Section 30253. Thus, the proposed policies are inconsistent with Sections 30235 and 30253 of the Coastal Act.

The City and landowner have argued that the shoreline protective device is not prohibited in this case because the area where the shoreline protective device would be located is neither a bluff or natural landform, thus the prohibitions regarding protective

devices incorporated into Section 30253 don't apply. Furthermore, the City and landowner have argued that there are existing structures in the Strand that necessitate protection by a shoreline protective device, thus the allowances within Section 30235 do apply. The Commission disagrees with the City and landowner regarding these assertions. The basis for this determination is described below and further detailed in Exhibits 10a-10d (incorporated here by reference).

1. FACTORS RELATIVE TO CONFORMANCE WITH SECTION 30253

a) The Presence of Bluffs At the Strand

The Headlands owes its prominence in large part to the resistance nature of the rock underlying the Headlands portion of the site. This rock, the San Onofre Breccia, is a resistant conglomerate unit that also forms headlands along the coast to the north. Although generally very resistant to erosion (bluff retreat rate is approximately 1.7 inches/yr) and relatively stable, landslides do occur. In contact with the San Onofre Breccia is the Monterey Shale, which forms the slopes in the Strand area, and underlies portions of the Bowl and properties offsite to the south and east. Throughout California, the Monterey Shale is susceptible to landsliding. Despite a relatively favorable bedding orientation, the coastal bluff in the Strand area is characterized by a complex of ancient landslides, none of which have shown any recorded historic movement.

The City and landowner have questioned whether the slope above the Strand should be considered a coastal bluff. They argue that the slope, which has an overall gradient of approximately 22%, is not steep enough to be considered a bluff. Further, they argue that previous grading on this slope has resulted in its alteration to the extent that it can no longer be considered a natural landform. Accordingly, they do not consider the proposed development at the Strand area to lie on a bluff face, and have declined to identify a bluff edge line in the Strand.

Although the slope below this upland is much less steep at the Strand than at the Headlands, the geomorphic features—bluff top and bluff face—are continuous. The difference in slope between the Headlands and the Strand is explained by the underlying geology and geologic processes that have been operating on the coastal bluff. The San Onofre Breccia is much stronger, and accordingly capable of standing at steeper slopes, than is the Monterey Formation. Further, at the Strand, the bluff must have been steeper at some point in the past, to provide a driving force for the creation of the large landslide complex that exists there today. The scalloped plan view of the bluff edge, the gentle slope of the bluff and to some extent the hummocky, irregular, slope of the Strand area itself, are the results of these slope movements in the past. Thus, while the slope of the landform is less steep than at other locations in the Headlands, the landform is unquestionably a bluff. The Commission's geologist has been to the site and in his professional opinion, the area constitutes a bluff. This

determination is consistent with the Commission's prior characterization of the area as a bluff contained within the existing certified LCP. Thus, the controlling language in Section 30253 relative to bluffs is applicable to the Strand, as it is equally applicable to the undisputed bluffs located elsewhere at the Headlands.

The Coastal Act definition of bluff edge is contained in California Code of Regulations, Title 14, § 13577 (h) (2). In keeping with this definition, the bluff edge would be defined under the Coastal Act to lie at "the landward edge of the topmost riser." Thus, the bluff edge line would be drawn at the demarcation between the relatively flat bluff top and the much steeper bluff face. The LUP must be revised to define bluff edge and demarcate its location consistent with the Coastal Act.

b) The Strand as a Natural Landform

The landowner also questions whether the slope above the Strand can be referred to as a "natural landform" due to the fact that it has been previously graded. According to the landowners, beginning in the mid 1920's roads, parking lots, a mobile home park, and other appurtenances have been constructed and have modified the landform. Grading has occurred over much of the northern portion of the Strand. However, the geologic cross sections supplied show that cuts and fill slopes generally were on the order of less than 5-10 feet. The southernmost part of the Strand was not graded extensively, as is apparent from aerial photographs.

Although the grading of the Strand created a stepped surface topography that allowed the construction of roads, mobile home pads, and parking areas, the overall form of the slope was little altered. Despite the grading at the site, the area is still recognizable as a bluff, a natural landform. In contrast, an artificial landform is a topographic feature that did not exist prior to grading or construction activities, such as a quarry pit excavation, a landfill, a freeway ramp, or a causeway. The Commission generally has recognized that natural landforms may be altered by grading—both cut and fill—but that they do not cease to be "natural landforms" because of such alteration. In this instance, it is also notable that the Commission's geologist has been to the site and unequivocally recognized the topography as being characteristic of a landslide complex (Exhibit 10c), which is a natural landform. The Commission finds that the Strand represents a natural landform that has been altered, but fundamentally remains a natural landform nonetheless. Thus, the controlling language in Section 30253 relative to natural landforms is applicable to the Strand, as it is equally applicable to the undisputed natural landforms located elsewhere in the Headlands area.

c) Effects of a Revetment on those Landforms

The Strand is a natural landform that consists of a bluff containing a landslide complex. As is discussed below, in order to develop the Strand in the manner proposed in the LUP, a significant quantity of geologic remediation will need to be implemented, and a shoreline protective device will need to be constructed to protect the newly remediated landmass. The shoreline protective device will halt the erosion of the toe of the landslide, preventing the slide mass from slipping as buttressing forces at the base of the complex are reduced by erosion of this material. Since the shoreline protective device would prevent the landslide from its natural tendency to reactivate and slide over time, the shoreline protective device would alter the natural landform.

d) Hazard Constraints at the Strand

The Strand is characterized by an ancient landslide complex. These landslides and their stability were investigated extensively as part of the preparation of the proposed LUP amendment. Although there is no evidence of historic movement on any of the ancient slide planes, the overall global factor of safety against sliding (static) for this complex ranges from 0.83 to 1.67. Notwithstanding the fact that a mobile home park previously occupied this area, the site is not suitable for the construction of fixed, permanent structures for human habitation without remedial work to stabilize these landslides.

Development on this landslide complex with permanent structures for human habitation requires that the stability of the site be improved, as required by City and County grading codes, and Section 30253 of the Coastal Act. Stabilization of the site could presumably be achieved through several means, but the approach proposed by the landowner, and contemplated in the LUP, is mass grading to balance the landslide forces and a revetment to protect the toe of the proposed manufactured slope from marine erosion, ensuring that the forces balanced by the grading operation remain balanced. The grading plan contemplated results in slopes that meet standards-of-practice stability guidelines for all reasonable failure modes, and can be constructed with slopes that are at or near that factor-of-safety of 1.2 that is standard-of-practice for temporary construction slopes.

The analysis above demonstrates that the slopes contemplated in the LCP will stabilize the Strand area and can be constructed safely. They do not demonstrate the stability of the site given ongoing marine erosion at the toe of the manufactured slopes. Just as for the ancient landslide complex, marine erosion of the proposed manufactured slope would lead to decreased slope stability over time. Accordingly, the design requires that marine erosion at the base of the manufactured slope be prevented. Given the environment at the site and the fact that sea level is currently rising, preventing the erosion of the toe of the manufactured slope requires that a shoreline protective device

protect the site from marine erosion. The proposed LUP would allow the existing revetment, which currently is in a state of disrepair, to be rebuilt and enlarged to accomplish this task[42][43].

Section 30253 of the Coastal Act requires that new development not "in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs." The proposed LUP would authorize the construction of 75 homes that, in order to achieve accepted standards of geologic stability, would require the construction of a shoreline protective device, a revetment, which, as shown above, would substantially alter natural landforms along the bluffs. Thus, the LUP policies would be inconsistent with Section 30253. The City and landowner were asked to consider whether development could occur in the Strand area without reliance on a revetment, or with reliance only on the existing revetment in its current condition. In response, the landowner supplied an analysis of an alternative that contained a soft "sacrificial" artificial slope fronting the development, and setting the development back sufficiently to assure its stability for its assumed design life of 75 years. The analysis predicts that the removal of the revetment would cause 29 to 87 feet of bluff retreat over the next 75 years, that this would result in the destabilization of the site such that by the end of the 75 year design life slope stability would be severely compromised, and that public safety, water quality, and existing and proposed development would be impacted. These impacts are similar to those expected of a naturally eroding shoreline. It could be concluded from these reports that the "sacrificial" artificial slope would protect the development for the required 75 years, but that at the end of that time the first line of development would be compromised. However, the impacts identified by these references are not consistent with good engineering practice, and could be construed

[42] The existing revetment is not adequate to provide the kind of protection necessary to protect the new development contemplated in the proposed LUP (see Exhibits 10a-10d).

[43] City and landowner have made various proposals for ways to reconstruct the revetment that they claim would qualify as a form or repair or maintenance. However none of the approaches suggested to date would qualify under the repair and maintenance exemption from Coastal Act permitting requirements, and thus, none of them would be approvable without independent Chapter 3 review, thus rendering an LUP policy providing carte blanche authority to reconstruct the revetment un-approvable. As noted above and in Exhibits 10a-10d, the amount of work necessary to provide an effective shoreline protective device for the new houses that are proposed to be built on the Strand constitutes a new structure, not a repaired structure. Section 13252(b) of the Commission's regulations clarifies that "replacement of 50 percent or more of …revetment…is not repair and maintenance.., but instead constitutes a replacement structure requiring a coastal development permit." At least 2,100 linear feet (i.e. 95%) of the approximately 2,200 linear foot long revetment at the Strand is proposed to be 'reconstructed.' In conjunction with grading (i.e. cut, fill, and re-compaction) all along the Strand, the reconstruction would consist of removal of the existing rock, re-compaction of the supporting earthen slope (including cut, rework, fill), seaward of the reworked fill, a 20 foot thick surface of geosynthetically-reinforced compacted fill would be constructed (no geosynthetically-reinforced compacted fill exists on the slope at present), excavation of a new foundation to bedrock where necessary, placing geotextile material upon the geosynthetically reinforced compacted fill as a foundation layer (which would also be entirely new material, not replacement of existing material), seaward of the geotextile layer will be a be a layer of small rock, Class No. 2 backing, and finally placement of rock rip-rap upon the new reinforced fill and backing to form a revetment. Much of the existing rock could be re-used (i.e. recycled) into the new structure, however, all the existing rock will need to be completely removed as part of a reconstruction effort. This is a new structure, not repair to the existing structure.

Also, even if it were possible to characterize the reconstruction of the revetment as repair and maintenance, and the above discussion indicates that such characterization is not possible, the work would require a coastal development permit. 14 C.C.R. §13252(a)(1)(A) requires a permit for repair or maintenance involving substantial alteration of the foundation of the protective works. In this case, an entirely new foundation consisting of newly compacted soil and geotextile fabric will be constructed. 14 C.C.R. §13252(a)(1)(B) requires a permit when there is temporary or permanent placement of rip-rap, berms of sand, or other materials on a beach, and 14 C.C.R. §13252(a)(1)(D) requires a permit when mechanized construction equipment is placed on a beach. In this case, during construction the rock would be lifted from its present location with mechanized equipment likely staged on the beach, and then stored on the beach as a cofferdam to protect the slope and the workers from possible flooding. Similarly, it would certainly be the sort of "extraordinary method" of repair and maintenance envisioned in 30610(d), both because it involves a seawall revetment (see 14 C.C.R. § 13252(a)(1)) and because of the work on the beach (id. at § 13252(a)(3)), that would necessitate a coastal development permit and be subject to the policies in Chapter 3 of the Coastal Act.

as construction with the intent of “benign neglect.” In meetings with staff, the City has indicated that they would not issue a building permit that assumed the continued erosion of the new development.

It is clear from the City and landowners submittal that developing the site in the manner proposed would necessitate both the geologic remediation of the site and the construction of a shoreline protective device to protect that development. However, it should be noted that there are no Chapter 3 Coastal Act policies which would compel the Commission to approve a land use plan which would allow the construction of residential development in a location that is subject to significant hazards which can only be remediated through significant grading and the construction of a shoreline protective device. Other less intense densities of the proposed use, or less intense uses could be accommodated in this area without relying on the stabilization scheme contemplated in the LUP.

Furthermore, as noted above, information submitted by the City and landowner suggest the Strand is presently comprised of three (3), large, irregularly sized legal lots. The proposed LUP would allow re-subdivision of this land to accommodate 75 single family residences. While the landowner presently has a right to obtain an economic benefit from its existing lots, there is no guarantee of maximum economic gain from those lots. In addition, the landowner has no guaranteed right to subdivide the land, particularly in a manner that engenders the need for significant grading and the construction of a shoreline protective device. The hazards present on the site were described in public documents available to the landowner at the time of their acquisition of that land, including the certified LCP. Alternative development which avoids extensive grading or additional shoreline protection has not been considered by the landowner. However, such development might include facilities for recreation, such as a campground or hiking trails. Even residential development might be possible on limited parts of the site, such as the area formerly occupied by tennis courts, landward of the bluff edge, near the center of the site.

The proposed LUP would allow a type and intensity of land use that would necessitate significant grading and the construction of a shoreline protective device along a natural bluff. This development would be inconsistent with a prohibition against such development contained in Section 30253. Thus, the Commission has no ability to authorize the proposed LUP, which would allow development to occur in a manner that is inconsistent with Section 30253 of the Coastal Act. Thus, the proposed LUP must be denied.

2. FACTORS RELATIVE TO CONFORMANCE WITH SECTION 30235

Section 30235 of the Coastal Act requires the authorization of shoreline protective devices that alter natural shoreline processes “when required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from

erosion, and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply." The proposed LUP amendment would allow the existing revetment to be reconstructed to minimize the potential for coastal slope erosion in the Strand. The LCP amendment also states that the revetment should be rebuilt to ensure public safety and coastal access. Neither of the reasons identified in the proposed policies -as justifying the re-construction of the revetment- is contained in Section 30235 of the Coastal Act. Furthermore, there are no other Chapter 3 policies in the Coastal Act that supply a basis for allowing the shoreline protective device.

In order for the Commission to find the proposed LUP policies consistent with Section 30235 of the Coastal Act, the Commission would need to determine either that the reconstruction of the protective device is generally consistent with the Chapter 3 policies of the Coastal Act or that, despite inconsistency with at least one of those policies, there are coastal dependent uses, existing structures, or public beaches in danger from erosion that override the other inconsistencies and necessitate approval of a shoreline protective device. The primary reason for constructing a shoreline protective device is to protect the proposed new residential development in the Strand from erosion hazards. Residential development is not a coastal dependent use. In addition, the residential development would be new, not existing. Finally, there are no identifiable public beaches in danger from erosion that the shoreline protective device would protect. Thus, the proposed policies, which would allow the construction of a shoreline protective device to protect new residential development, are inconsistent with the requirements of Section 30235 of the Coastal Act.

The City and landowner have urged that the proposed LCP is consistent with Chapter 3 Coastal Act policies (Exhibits 18b-18d). In summary, these arguments include: 1) there are existing structures in need of protection in the Strand associated with the former mobile home park such as roads, foundation pads, septic sewer system, storm drains, utilities, tennis courts, and five community structures (all highly dilapidated), and other development including a public accessway, sewer pump station, emergency vehicle beach access, lifeguard station and upcoast and downcoast residential development; 2) coastal processes will not measurably change/be affected by the shoreline protective device; 3) the shoreline protective device is needed to protect offshore marine habitat including kelp beds; 4) new water treatment and anti-erosion devices that will improve water quality could be constructed if a new shoreline protective device is constructed; 5) new coastal access will be accommodated by the new shoreline protective device. The Commission's response to these claims follows. However, before assessing the City and landowners' arguments, it should be briefly noted that shoreline protective devices are inconsistent with several Coastal Act policies. For instance, as described above a shoreline protective device at the subject site will alter natural landforms along the Strand bluffs, thus it will be inconsistent with Section 30253. Furthermore, a shoreline protective device will contribute to erosion of the beach in front of the device, another factor rendering the device inconsistent with Section 30253. The shoreline protective device contemplated in the LUP, a revetment, will occupy significant beach area. In addition, over time, as sea level rises, the width of the beach will shrink because the back beach has been fixed, making the beach less usable, or unusable by the public.

These factors render the shoreline protective device inconsistent with Section 30213 of the Coastal Act. Finally, shoreline protective devices, including that contemplated at the Strand, have adverse visual impacts to and along the shoreline, thus rendering the development inconsistent with Section 30251 of the Coastal Act. These issues are discussed elsewhere in these findings.

a) The Presence of Existing Structures

A majority of the existing development cited by the City and landowner as necessitating protection by a shoreline protective device would be completely demolished with the development of the Strand for residential purposes. The Commission has generally not considered development 'existing', for purposes of Section 30235 of the Coastal Act, and not allowed 30235 to be invoked to "protect [such] existing structures" if the structures will be demolished as part of the ultimate development plan. Furthermore, even if the development goals were to change toward rehabilitating and using the existing development, engendering the need for protection from erosion, the existing revetment could be repaired –without full reconstruction- to accomplish this goal. Note that repair of the existing revetment wouldn't allow for the stabilization needed to use the Strand for the planned residential development. Also, it should be noted that the Commission has traditionally taken the position that Section 30235's mandate to permit shoreline devices to protect existing development is limited to the protection of existing development that is substantial.

The City and landowner have not submitted substantial evidence that the other development, such as the remains of a mobile home park including a road network, retaining walls, abandoned buildings in severe disrepair and a storm drain system; County public accessway; County parking lot inland of the Strand; sewer pump station; emergency access; lifeguard station and residential development are in need of shoreline protection. Nevertheless, for illustrative purposes to assess whether the City and landowner have a meaningful argument relative to the need to protect the existing structures, it is useful to place the existing structures into two categories, those that can continue to be used without significant repair or upgrade, and those that are in such a severe state of disrepair that their use would necessitate significant re-construction.

For instance, the existing storm drain system could continue to be used (however, some minor repair and maintenance may be necessary). However, if protection of the storm drain system is the only goal, then there would likely be some shoreline protection options for this purpose that are far less extensive than the planned re-construction of a 2,100 foot revetment, including no present action at all.

The other structures in the Strand area, such as the abandoned buildings, and perhaps the roads and retaining walls, would fall in the other category, those requiring significant upgrade. The kind of upgrade likely needed would be so significant that their reconstruction would be considered 'new development' under the Coastal Act. In the

case of these structures, as with any new development, the new development should be designed in a manner that does not require a shoreline protective device.

With respect to off-site structures that may necessitate some type of shoreline protection along the Strand, there are the County facilities inland and upcoast of the site and the residential neighborhood upcoast of the site. For the inland County facilities, due to their significant setback, there is likely little need for a shoreline protective device at this time. As for the upcoast County facilities and residential area, there may be some argument that some kind of shoreline protection is needed on the site to protect this existing development, however, as with the storm drain system, there would likely be options that are far less extensive than the planned re-construction of a 2,100 foot revetment. For instance, portions of the existing revetment could be repaired or a much smaller shoreline protective device (e.g. a few hundred linear feet rather than 2,100 linear feet) could be considered.

b) Effects of Shoreline Protective Device on Coastal Processes

The City and landowner argue that coastal processes will show no measurable change compared with current conditions. The intent of this statement appears to be an assertion that the shoreline protective device will not 'alter shoreline processes' within the meaning of Section 30235. The Commission disagrees with the conclusion that the existing revetment is not altering natural shoreline conditions. The City and landowner have indicated that removal of the existing revetment could cause property damage and may alter the marine areas, however, these changes would result from returning this section of shoreline to a more natural, unaltered condition. Erosion, slides and slumps are part of the unaltered condition for this shoreline and options to perpetuate current conditions are options that perpetuate an "altered" shoreline. Thus, it is clear that the existing revetment or a reconstructed revetment alter shoreline conditions. Quoting from an analysis submitted by the landowner[44] (Exhibit 8d):

> *In absence of structural shore protection, the shore fronts slopes in either the pre- or post-project configuration are made up of unconsolidated sedimentary material that is easily eroded by high energy wave events, and by moderate wave events if they occur during spring tides. There is no natural form of shore protection (eg. wide equilibrium sandy beaches, cobble berms, or consolidated formations interior to slope) to prevent or arrest progressive erosion of pre-or post-project shore front slopes if structural shore protection is removed from the site.*

In its natural condition, prior to construction of the riprap revetments and the harbor, this shoreline may or may not have been in dynamic equilibrium. Progressive erosion and resulting sedimentation and turbidity would be the natural conditions that would exist in this location if there were no shore protection. The continued maintenance and

[44] Scott A. Jenkins, PhD & Joseph Wasyl. 2002. Constraints and Unique Characteristics Effecting Non-Structural Shore Protection Alternatives for the Dana Point Headlands Development and Conservation Plan. 17 November 2002.

reconstruction of shoreline protection in this location will maintain the current, modified conditions at this location[45].

The above analysis assesses whether the revetment would "alter" shoreline processes from their natural state. Another baseline the Commission could use for determining whether the revetment "alters" shoreline processes is existing conditions. The existing conditions are not the same as natural conditions. Furthermore, the existing conditions involve ongoing, progressive deterioration of the existing revetment. The coastal condition with the existing revetment and with a reconstructed revetment will be different over time. The reports by Noble Consultants[46],[47] and Jenkins and Wasyl show that a new riprap revetment can be constructed in essentially the same footprint as the existing revetment and such construction should be possible to accomplish in the field. Noble Consultants and Jenkins and Wasyl further conclude that since there will be no significant seaward encroachment by a new revetment, there will be no significant changes from the existing coastal condition if the revetment is reconstructed. This is a valid conclusion for the short-term. However, over the long-term, the existing condition is that the revetment will continue to deteriorate. Eventually the natural slides, slumps and erosion will occur as part of the existing condition. A reconstructed revetment would prevent these conditions from developing over the long-term. Over time, the coastal conditions that would exist with a new riprap revetment would differ more and more from what would exist if the existing revetment were allowed to deteriorate. Just because the new revetment would occupy the same footprint, does not mean that the new revetment would have the same performance or result in the same future coastal conditions[48].

In the evaluation of projects, the Commission often needs to consider not only the immediate impacts from a possible action, but the longer-term effects. For new development on bluffs and for shoreline protective structures, that is often assumed to be 50 to 75 years, however, as noted by The Headlands Reserve LLC in its November 21, 2002 memo, "While a typical home may only have a useful life for 50 to 75 years (or longer) the development, i.e. legal lots, infrastructure, etc. have an indefinite life as long as improvements are maintained." Examination of The Strand Beach with and without the proposed revetment reconstruction should begin by considering the next 50 to 75 years, but this may, in actuality, greatly underestimate the time period over which this section of coast would be altered by the reconstruction of the existing revetment.

Even if the volume of sand at The Strand Beach has remained relatively constant from the 1920's to present, this is no guarantee that this condition will continue for the 75 or more years that this beach could have an armored back shore. As stated by Robert

[45] California Coastal Commission. 2003. Memo from Lesley Ewing to Karl Schwing dated July 21, 2003.
[46] Noble Consultants, Inc. 2001. Coastal Processes Assessment for Headlands Development and Conservation Plan. In Appendix J, Final Environmental Impact Report prepared by LSA Associates September 2001.
[47] Noble Consultants, Inc. 2002. Headlands Development and Conservation Plan, Supplemental Assessment for Shorefront Protection Alternatives, Dana Point, CA. May 2002.
[48] California Coastal Commission. 2003. Memo from Lesley Ewing to Karl Schwing dated July 21, 2003.

Wiegel in his review of the submitted material[49], "Many uncertainties are involved in trying to predict the future, such as decadal changes in wave climate, based on a relatively short length of time of observations; trying to know these quantitatively." In part, because of this uncertainty, Robert Wiegel concludes that a structure should be used along the boundary between the beach and the upland to insure long-term protection of the upland development. This conclusion was provided within the context that the site will be used for permanent development and that these forms of shore protection are the most effective engineering options of the 6 proposed alternatives. It would be equally appropriate to conclude that since "(m)any uncertainties are involved in trying to predict the future" that it is difficult to predict whether or not shore protection will alter shore processes in the future. Such changes could reduce shoreline sand supply and most likely reduce access and recreational opportunities.

Shoreline change is far more common both geographically and temporally than shoreline stasis. Acceleration in the rise in sea level or higher high water would inundate larger amounts of the narrow wave-cut platform. Without increased sediment inputs, the width of dry beach would be reduced in the future. This will be worsened slightly by the cumulative reduction in sediment (averaging 1,800 cubic yards annually) due to the armoring throughout this mini-cell.

During the times that the revetment is exposed to wave attack (i.e. when it is really needed to protect the backshore), the revetment will interact with waves and alter wave energy dissipation and reflection from what it would be if the revetment were not in place. When the revetment is exposed to wave attack there will be changes in the mobilization of beach sand, a reduction in beach access and impairment of recreational opportunities from what exists when the revetment is not exposed to wave attack. Noble Consultants (May 2002) have estimated that the new revetment will be exposed to wave attack, on average, 21.94 days per year if the sand level stays at +8.0 feet, MLLW. If the sand level fronting the revetment drops by one foot, the potential annual exposure would increase to 48 days. With a two-foot drop in sand level, the potential annual exposure would increase to almost 60 days. The drop in sand level could occur from a continued reduction in the amount of sand getting to the beach. An apparent drop in sand would occur if there were a rise in sea level. Either condition would increase the amount of time that the revetment is altering coastal processes.

Surfrider Foundation has submitted photographs of the beach taken on 9 November 2002 when there was a 5.5-foot high tide. It is clear that during times that the revetment is being impacted by waves, the beach is inundated and impassible. (Attachment to 26 December 2002 letter from Michael Lewis) These impacts will increase in frequency and significance if the sand levels drop and the revetment is exposed more regularly to wave attack. The impacts will also increase in frequency and significance if there is a rise in sea level or high and higher high water.

[49] Robert L. Wiegel. 2003. Peer Review of Reports on Coastal Engineering Aspects of the Headlands Development and Conservation Plan, Dana Point, Orange County, California" 20 March, 2003, as amended on March 21, 2003 letter from Kevin Darnall.

The existing revetment does alter coastal processes, local sand supply, beach access and opportunities for coastal recreation when there are wave structure interactions. These will continue in the future with either the existing revetment or a proposed new structure. These impacts will worsen if there is a drop in sand level or an increase in sea level. Thus, the existing and contemplated shoreline protective devices alter coastal processes and are subject to the requirements of Section 30235 of the Coastal Act.

c) Necessity of Shoreline Protective Device to Protect Offshore Habitat

The City and landowner have asserted that the existing and contemplated shoreline protective devices are necessary to protect existing marine habitat offshore of the Strand. The study submitted[50] hypothesizes a catastrophic landslide as a possible result of revetment removal, followed by high turbidity from the erosion of the Strand area, and that this turbidity would have a negative impact on the kelp beds. Although turbidity associated with the erosion of landslides such as these certainly is likely, the event hypothesized is the largest, most severe event that could be contemplated; more likely is the gradual failure of the Strand area though repeated, smaller landslide events. Aerial photographs taken in 1952[51], before the revetment was constructed at the site, show thriving kelp beds immediately offshore. Apparently, the erosion of the landslide complex that must have been occurring prior to the construction of the revetment did not interfere with the growth of healthy kelp beds.

Furthermore, even if a landslide were to occur, the City and landowner have provided no empirical evidence that the landslide would in fact cause adverse impacts to the kelp beds located offshore of the Strand. Surfrider Foundation has submitted a letter (Exhibit 9d) indicating the City's and landowner's analyses of the kelp forest impact issue was reviewed by several well renowned researchers who concluded the reports submitted by the City and landowners do not substantiate the claim that a shoreline protective device is necessary to protect the kelp beds. The Commission concurs that no compelling evidence has been submitted that a new shoreline protective device is necessary in order to protect the kelp beds.[52]

It should be noted that CDFG has submitted comments regarding alternatives to the reconstruction of the revetment and potential effects on the off-shore reefs[53] (Exhibit 14a). The letter identifies potential issues regarding beach nourishment, in-lieu of a shoreline protective device, and removal of the revetment, including the potential for a sacrificial dune in lieu of a hardened shoreline device. In these instances, CDFG expresses some concern regarding potential adverse effects due to turbidity and

[50] Scott Jenkins Consulting. 2002. Evaluation of coastal processes effects associated with removal of the revetment from the Headlands Development and Conservation Plan. 72 p. report dated 2 May 2002 and signed by S. A. Jenkins and J. Wasyl.
[51] Continental Aerial, date 12.12.1952, images 3K49 and 3K50
[52] Furthermore, the Commission notes that Section 30235 of the Coastal Act requires the permitting of protective devices in a very limited, enumerated set of circumstances, and the protection of offshore habitat is not within that list.
[53] California Department of Fish and Game. 2003. Alternatives to Reconstruction of the Existing Rip-Rap Revetment for the Dana Point Headlands Development and Conservation Plan. Memorandum from Eric J. Larson, CDFG, to Karl Schwing, CCC.

sedimentation upon the reef and associated marine life. Given the alternatives identified in the letter, CDFG concludes that reconstruction of the existing revetment would be the least environmentally damaging alternative and urges the Commission to consider impacts to marine resources in its review of alternatives for shoreline protection.

The Commission notes that the letter does not make any assertion that a new shoreline protective device is necessary to protect the off-shore reefs. Rather, the letter simply states that if some kind of shoreline protection is found to be necessary, that the alternative chosen should be one that would not lead to significant increases in turbidity and sedimentation that would adversely impact the off-shore reefs. Furthermore, the letter does not attempt to analyze any alternatives other than the ones specifically mentioned in the letter. The letter does not attempt to analyze alternatives such as other hardened structures, such as vertical walls, nor does it analyze alternatives that may include more landward alignments of shoreline protective devices.

d) Shoreline Protection, Water Quality & Erosion

The City and landowner have argued that new water treatment and anti-erosion devices that will improve water quality could be constructed if a new shoreline protective device is allowed at the Strand. The City and landowner indicate that storm water and low flow nuisance water from inland areas presently travels through an existing storm drain system that passes through the former mobile home park and discharges at the revetment onto the sandy beach at the Strand. The City and landowner indicate that these storm water flows are presently untreated. Further, the City and landowner indicate that the existing discharge locations are dilapidated and are causing erosion on the beach. The City and landowner state that under the proposed LCPA, the water flowing from inland areas, and water discharged from the new development that would occur under the LCPA in the Strand, would be treated and discharged in a non-erosive manner at the beach. The City and landowner assert this is only possible with the shoreline protective device.

The Commission finds there is no substantive link between the provision of water quality treatment, the control of erosion from storm water discharges and the need for a protective device at the Strand. Non-structural and structure best management practices to treat storm water and nuisance flows from existing development could be implemented at the source of these existing flows. No evidence has been submitted which demonstrates that the proposed project is the only alternative to treating existing storm flows. Furthermore, the existing outlets could be repaired and upgraded to address the existing erosion problem. No evidence has been submitted which demonstrates that a new shoreline protective device is necessary to address the existing problem. Meanwhile, no evidence has been submitted which demonstrates that

development in the Strand can only be accommodated in the manner contemplated in the LUP, which relies on significant grading and a shoreline protective device[54].

e) Shoreline Protection & Public Access

The City and landowner have argued that significant public access benefits will be conveyed to the public in conjunction with the construction of the residential development and a shoreline protective device in the Strand. These public access benefits would include a re-constructed public access stairway along the upcoast boundary of the Strand, a new pedestrian accessway through the residential development including a new path directly to the beach, a new emergency vehicle access at the southerly portion of the Strand, various beach support facilities including restrooms, and dedication of Strand Beach to the public. The City's informal revised submittal also includes a public walkway lateral to the beach along the top of the shoreline protective device/revetment. While these features would improve public access to the Strand, none are reliant upon the reconstruction of the revetment, as contemplated in the LCPA. Alternative alignments, setbacks and other tools could be used to provide these same proposed amenities, while any existing facilities could be maintained without the type and size of shoreline protective device contemplated in the LCPA.

3. OTHER ISSUE AREAS RELATED TO HAZARDS

a) Geologic stability and coastal erosion at the Headlands

Long-term coastal erosion rates for the Headlands have been investigated by the City and landowner. The investigation found that erosion in the Harbor Point Area was about 10 feet during the previous 70 years. Based on this, the expected bluff retreat in this area, over the 75 year useful economic life of the development, is less than 11 feet. Accounting for slope stability and ongoing bluff retreat over the expected economic life of the development, the Commission finds that a 50 foot setback from the bluff edge would be required for any structures in the Headlands area. Other than COSE Policy 2.10, which describes a minimum 25 foot setback from bluff edge or a setback that accommodates 50 years of erosion, the proposed LUP does not implement the required 50 foot setback. In order to find the LUP consistent with Section 30253 of the Coastal Act, the LUP would have to include policies that implement a minimum 50 year structural setback from the bluff edge at the Harbor Point Area.

[54] Furthermore, the Commission notes that Section 30235 of the Coastal Act requires the permitting of protective devices in a very limited, enumerated set of circumstances, and the protection of water quality is not within that list.

b) Infiltration at the Headlands and the Strand

Although slope stability is of limited concern in the Headlands/Harbor Point promontory area, at least as compared to the Strand area, the relatively low global factors of safety for the Headlands/Harbor Point promontory bluffs, the presence of the two moderately large, active, landslides at the northern and southern end of the site, and on-going surficial slumping all indicate that caution is in order. Accordingly, development should be set back at least 50 feet from the bluff edge as recommended above. In addition, it would be prudent to limit the infiltration of ground water throughout the site, but especially close to the bluff edge and in the vicinity of the mapped inactive faults. In these areas, especially, the use of infiltration as a water quality BMP is not appropriate. Further, irrigation should be kept to a minimum to limit the increase in ground water levels that commonly accompany residential development in southern California. The LUP must include policies that directly address these issues.

Similarly, due to the instability of the Strand area, it is especially important to limit the build up of ground water in either the natural landslide deposits or in any fill slopes constructed at the site. Fill slopes should have adequate drain systems, and the infiltration of ground water should be kept to a minimum. In the Strand area, the use of infiltration as a water quality BMP is not appropriate. Further, irrigation should be kept to a minimum to limit the increase in ground water levels that commonly accompany residential development in southern California. To be approvable, any proposed LUP amendment must include policies that directly address these issues.

c) Other Revisions

Furthermore, to address hazards issues, the LUP would need to incorporate revisions, including but not limited to, the following:

- Prohibit new development in hazardous areas where adequate factors of safety cannot be achieved;
- Only the least environmentally damaging feasible alternative should be used for hazard remediation and stabilization;
- Land divisions should be prohibited that would create lots that are subject to flooding, erosion and geologic hazards or that would have other significant adverse, including cumulative, impacts upon coastal resources;
- All applications for new development on a beach, bluff or bluff top should be accompanied by a geologic and wave uprush hazards analysis;
- Hazards analyses for shoreline development should incorporate anticipated future changes in sea level;
- New development on a beach or bluff should be sited outside the anticipated hazard area;
- State Lands Commission should be consulted on all beachfront development; shoreline and bluff protection structures to protect new development should be prohibited;

- Shoreline and bluff protection to protect ancillary or accessory development should be prohibited;
- Where shoreline protection structures can be justified, 'vertical' seawalls should be used in order to minimize impacts upon sandy beaches;
- Property owners voluntarily developing in hazardous areas should be required to record deed restrictions against their property that prohibit future shoreline protection and require the landowner to assume the risks of developing in a hazardous area.

C. SHORELINE AND COASTAL RESOURCE ACCESS

Coastal Act Sections 30210 through 30214 are the predominant polices that will be used to evaluate the conformance of the LUP with the access requirements within the Coastal Act. Sections 30210 through 30214 of the Coastal Act establish, among other things, that public coastal access opportunities must be maximized, that development must not be allowed to interfere with certain rights of public access, that public facilities must generally be distributed throughout the City's coastal zone, that lower cost visitor serving opportunities must be protected and encouraged, and that public access can be regulated in terms of time, place, and manner. Section 30252 of the Coastal Act requires that new development should maintain and enhance public access to the coast.

The proposed LUP contemplates providing public access to the coast in a variety of ways including a trail network linking the major land use areas on the site, public pedestrian access from the existing County parking lot in the Strand to Strand Beach, the dedication of the presently privately owned area of Strand Beach to the public; and the dedication of other open space. The public access components contemplated in the LUP would significantly enhance public access to the coast. However, there are components of the proposal that raise significant public access issues under Chapter 3 of the Coastal Act. First, the proposed LUP contemplates the construction of a shoreline protective device to protect new development in the Strand that could cause immediate and long term adverse impacts upon the public's ability to access the shoreline. Second, the proposal contemplates the prohibition of public vehicular access to the beach through the residential development in the Strand. Third, the proposed LUP raises concerns relative to the absence of procedures and timing to control implementation of the public access components of development in the Headlands area.

1. SHORELINE PROTECTIVE DEVICES & PUBLIC ACCESS

Section 30211 of the Coastal Act states that development shall not interfere with the public's right of access to the sea where such rights were acquired through legislative authorization or use. Section 30210 of the Coastal Act requires that access be

maximized and recreational opportunities provided. Section 30213 of the Coastal Act requires the protection and, and where feasible, provision of lower cost visitor and recreation facilities. Shoreline protective devices can have adverse impacts upon public access in several ways. First, the shoreline protective device can occupy sandy beach area, prohibiting the use of that area by the public. Second, shoreline protective devices permanently fix the back of the beach which leads to narrowing and eventual disappearance of the beach in front of the structure. Third, shoreline protective devices contribute to the sustained erosion of the beach during the winter season and impair the ability of the public beach to rebuild through accretion during the summer season. Fourth, shoreline protective devices can exacerbate erosion of the resultant narrow public beach area by accelerating erosion of the beach and by increasing the time that the public beach is covered by ocean waters.

The proposed LUP would allow the construction of a shoreline protective device along the Strand. There presently is an existing revetment along the Strand that was constructed in the 1950s. The development contemplated in the proposed LUP necessitates the complete removal of the existing revetment and the construction of a new one. The City's informal submittal adds an allowance for the replacement of the old revetment in a modified form that, regardless, is still a new shoreline protective device because it would be completely removed and reconstructed. The LUP specifically calls for the reconstruction of a revetment, with no allowance for the consideration of other types of shoreline protective devices. The LUP would prohibit seaward encroachment of the new shoreline protective device, compared with the footprint of the existing device, except for public access and public safety.

It should be noted that the beach above the mean high tide line is presently privately owned. The proposed LUP would designate the beach as public recreation open space, thus, the City intends for the beach to be transferred into the public domain in association with allowing the development contemplated in the proposed LUP. However, as will be more fully explained below, the LUP contains no strong mechanism to ensure that this transferal occurs. Furthermore, the proposed LUP which would allow a revetment to be constructed to protect new development is inconsistent with Section 30253 of the Coastal Act.

The policies in the LUP that contemplate a revetment are also inconsistent with Section 30213 of the Coastal Act. By allowing a revetment to be constructed, the LUP policies will extend the period of time over which the back beach will be fixed by a shoreline protective device. According to The Coast of California Storm and Tidal Waves Study for Orange County the beach retreat rate in this area is about 0.17 to 0.2 ft/yr. The Strand beach is at about its maximum holding capacity for sand, meaning that the beach cannot widen by moving seaward. The beach has been held at its current location since the 1950's when the current revetment was installed. Assuming that the shoreline had not been armored, and assuming that there would not have been a massive slide during the past 50 years, the current back beach line would be approximately 10 feet further landward than it is now (0.2 ft/yr x 50 years). Over the next 75 years, which is the anticipated economic life of development, the shoreline

could be expected to retreat an additional 15 feet, with the same assumptions (Exhibit 10a). However, with the back beach fixed by a shoreline protective device, the beach cannot grow landward. Meanwhile, sea level is conservatively anticipated to rise 0.66 feet over the next 75 years. With an average shoreface slope of 0.033 rise to run in this area, sea level rise is anticipated to inundate 20 feet of beach more than is inundated today[55]. The beach will become more narrow over time. Waves will inundate the dry beach and interact with the shoreline protective device more regularly, thus the beach will be available to the public for progressively smaller periods of time until at some point the beach becomes so narrow and so regularly inundated that no dry sandy beach is available to the public. Thus, the policies that allow the construction of the revetment will allow development that progressively destroys a lower cost visitor and recreational facility, the sandy beach, which is inconsistent with Section 30213 of the Coastal Act, thus the proposed LUP must be denied.

Also, as noted above, the LUP specifically calls for the construction of a revetment along the Strand to protect the proposed development. It should be noted that if the Commission were to find it possible to approve an LUP that would allow the construction of a shoreline protective device along the Strand, for instance by using the balancing provisions of the Act, the LUP would need to include provisions that would allow for an analysis of alternative shoreline protective device designs with the goal of minimizing the amount of sandy beach occupied by that device. The discussion above notes that the existing revetment has fixed the back beach along the Strand since the 1950's, based on back beach retreat rates for the area, the current back beach line would be approximately 10 feet further landward than it is now. Over the next 75 years, the shoreline could be expected to retreat an additional 15 feet, with the same assumptions. If a shoreline protective device were to be constructed along the Strand, designs should be considered that would establish a back beach line consistent with where the back beach line would have been had the beach existed in its natural condition. For instance, a vertical seawall, rather than a revetment, would have a smaller footprint and occupy less beach area, thus providing additional dry beach for the public to use now and in the future. The analysis could also consider more landward alignments of the shoreline protective device to gain more beach area. The proposed LUP lacks such policies.

Also, if LUP policies were to allow a shoreline protective device along the Strand, such development must be accompanied by alternative lateral access and parkway along the beach, in a location protected from tidal action, such as immediately on top of and inland of the shoreline protective device. This lateral access and parkway would allow the public to enjoy the shoreline at times that tidal action prevents or severely limits public access to and along the sandy beach. A parkway with grass or other similar surface with space for individuals and families to gather and enjoy the ocean is an important and necessary component in order to offset the loss of sandy beach that would otherwise be used for this purpose. The proposed LUP lacks policies to

[55] This estimate is based only on the change in water elevation relative to the existing beach, and does not account for possible shifts in sediment on the shoreface to otherwise modify the location of the shoreline.

implement these components necessary to assure public access to and along the shoreline.

The City and landowner have submitted an informal proposal that partially addresses the lateral access issue identified above. This proposal would incorporate a narrow pedestrian path along the top of the revetment. While this proposal would address the lateral access issue, it fails to address the parkway/gathering area necessary to offset the loss of access to sandy beach. Thus, without the additional provision for a public parkway area, the Commission could not find that proposal consistent with the public access policies of the Coastal Act.

2. GATING OF THE RESIDENTIAL DEVELOPMENT

The residential area contemplated by the proposed LUP in the Strand would be located between Selva Road (a public road) and the sea[56]. The proposed LUP does not contain any explicit policy that prohibits public vehicular access through the proposed residential area. This prohibition is more directly carried out in the IP (i.e. the Headlands PDD), however, the issue is discussed here in detail.

Presently, there is no public vehicular access near the sandy beach in the Headlands area, nor in nearby surrounding areas. Rather, beach access is limited to pedestrian access. Under the proposed LUP, similar types of pedestrian beach access would be provided from the County parking lot above Strand beach. The lack of vehicular access near to the beach limits the use of those beach areas to individuals capable of long, steep descents and ascents to and from the beach. Where feasible and opportunities arise to remedy a limitation on public access, such limitations should be addressed. The proposed LUP contemplates the construction of a residential neighborhood, including a road network, that could provide, at minimum, a drop-off area for the public near the sandy beach that would be accessible by vehicle. Upon completion of drop-off, the driver could return to the existing County parking lot.

The City and landowner have expressed concerns regarding public vehicular access to a drop off in this area. First, the City and landowner have indicated that the roads contemplated in the Strand residential area are narrow and are not designed to accommodate traffic beyond that anticipated for the residents and guests of the neighborhood. Also, the City and landowner have suggested that opening the road network to public vehicles will suggest that there is public parking available along those streets. Once drivers realize they cannot park, they will need to turn around, leading to traffic congestion in the neighborhood and possible safety concerns for the pedestrians traveling along the public pedestrian pathway that is proposed through the Strand.

The Commission generally does not sanction exclusivity in the coastal zone by allowing gated development between public roads and the beach. Gated neighborhoods adjacent to the beach give an impression that the beach is also private. However, the

[56] Note that Selva Road is not identified on the Commission's post-certification map as the 'first public road', presumably because the road is not continuous. Rather, the more landward Pacific Coast Highway is identified as the first public road.

circumstances at this site suggest that gating the residential area to public vehicles would not result in an adverse impact upon the public's ability to access the beach. For instance, the presence of the large County parking lot that accommodates public parking makes it clear there are public access opportunities present. Appropriate signage and visual cues to pedestrians would further minimize adverse impacts. Specific LUP policies to implement these mitigation measures would be appropriate. Nevertheless, the absence of, at minimum, a drop off near beach level within a new street network that could feasible provide such access is an adverse impact, a clear failure to maximize access (30210), and a failure to provide access in new development (30212). The City and landowner must identify alternatives to provide an alternative type of access that will allow individuals of all physical abilities to access the beach.

Under the informal submittal, City staff have added language to the Urban Design Element of the LUP that would explicitly allow gating of the Strand residential community to vehicles provided that mechanized access from the existing County parking lot to Strand Beach, likely in the form of a funicular, is included as part of the plan. The Commission could find this alternative acceptable, provided that additional policies are included in the LUP to assure adequate public access. For instance, the LUP should provide clear mechanisms triggering the requirement to construct the mechanized access and the period by which it must be available to the public, as well as an appropriate management entity, operation and maintenance plan, and cost controls to assure the system is available to the public during reasonable time periods for a reasonable cost. Furthermore, LUP policies which mandate appropriate signage and visual cues to clearly demarcate the public pedestrian path through the neighborhood to the beach, as well as strict controls limiting changes to the management of the County parking lot that would discourage the public from using that public parking lot must be incorporated.

3. SCHEDULE FOR PROVISION OF PUBLIC ACCESS COMPONENTS

The proposed LUP purports to provide extensive public access amenities such as the dedication of Strand Beach, a public trail network and accessways to the beach, as well as various public open space areas. However, the LUP only contains relatively unspecific narrative in the Conservation Open Space Element regarding the need to prepare an open space program for the creation and management of the public access program. The fact the Headlands area is presently owned by a single landowner currently simplifies the implementation of an open space plan. However, the existing subdivision makes it possible for individual or groups of parcels to be transferred to another landowner. If such a transfer were to occur, the procedures and timing necessary to implement the public access components would become more complex. In either case, the Commission finds that the proposed LUP lacks sufficient detail regarding the timing and mechanisms for implementing the open space program. The LUP must contain policies which identify a trigger for dedication of public access and open space areas and the phasing by which the various public access and open space

amenities must be open to the public. Some of these measures are contained in the proposed PDD, but without corresponding provisions in the LUP, it is not possible to assess whether those provisions conform with the LUP. These and other policies must be incorporated into the LUP to assure that the public access and open space amenities are transferred into the public domain and made available for public use in a timely way.

D. RECREATIONAL AND VISITOR SERVING FACILITIES

Coastal Act Sections 30212.5, 30213, 30221, 30222, and 30223 address the provision of recreation and visitor serving facilities in the coastal zone. Section 30212.5 requires that visitor serving public facilities, such as parking be distributed to prevent any one area from becoming overcrowded. Section 30213 requires that lower cost visitor serving facilities will be protected, encouraged, and were feasible provided. Section 30221 states that oceanfront land suitable for recreational use will be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided in the area. Section 30222 requires that private lands suitable for visitor-serving commercial recreational uses designed to enhance public opportunities for coastal recreation will have priority over private residential, general industrial, or general commercial development, but not over agriculture or coastal-dependent industry. Section 30223 requires that upland areas necessary to support coastal recreational uses shall be preserved for such uses, where feasible.

The proposed LUP raises several concerns with the Coastal Act. The first is reserving appropriate land in the Headlands area to provide visitor overnight accommodations and appurtenant visitor serving uses consistent with Section 30223 of the Coastal Act. Another issue is the provision of lower cost visitor recreation facilities, in particular, the provision of lower cost overnight accommodations. A third issue, largely associated with the IP, is the allowance for fractional ownership of the visitor accommodations.

The findings herein discuss the presence of ESHA in the Headlands area and the proposal to designate 2.8 acres of land that contains ESHA for visitor/recreation commercial land use near the intersection of Green Lantern and Cove Road. The LUP targets this area for a 65 room inn and associated visitor serving commercial amenities. Construction of the hotel would result in the destruction of ESHA, which would be inconsistent with Section 30240 of the Coastal Act. Thus, the location contemplated in the LUP for a hotel and the policies enabling construction of the hotel in that location are inconsistent with the Chapter 3 policy protection ESHA (30240).

The Headlands area is the last large, mostly vacant, privately owned area of land in the coastal zone in the City of Dana Point, and among the largest vacant privately owned lands in coastal Orange County[57]. The Headlands is also one of the few significant areas of land that has ocean frontage. There are significant portions of the site that contain ESHA which must be protected from development that would disturb the ESHA.

[57] Bolsa Chica in Huntington Beach and Banning Ranch in the Newport Beach area are larger at approximately 308 and 412 acres, respectively.

However, there remain significant portions of land on the site that are developable with more intense uses, such as within the bowl area of the site. There are also opportunities for development within the Strand, provided such development can be undertaken consistent with Section 30253 of the Coastal Act. In order to advance Coastal Act goals relative to the provision of visitor serving commercial and recreation oriented facilities, the City must carefully consider identifying a suitable location within the Headlands area for visitor serving overnight accommodations that avoids impacts upon ESHA. Furthermore, the City should strongly consider providing various types of accommodations, including lower cost oriented accommodations.

Also, it should be noted that the proposed LCP would allow fractional ownership of the lodging facility. Fractional ownership would be similar to timeshares. Though fractional ownership/time-shares are similar to hotels in many ways there are significant differences that favor interpreting fractional ownership/time-shares as a form of residential development. Fractional ownership/time-shares cannot be considered to be a true visitor serving development, like a hotel, since it is membership based and it would be possible for members to stay for significant periods of time. In fact, it would be possible for a fractional owner/time-share member to buy enough time slots to cover an entire year, which would basically make the time-share member a year round resident. Furthermore, the Commission recognizes that fractional ownership/time-share membership, though it is available to general public, once purchased by the member would not promote maximum public access opportunities on a first come first serve basis such as hotels provide.

Fractional ownership/timeshares typically involve the "*selling*" of units to more affluent vacationers who typically stay in the units for longer periods of time than overnight use. Because they are occupied for longer periods of time by those who buy interests in them, they are almost considered to be a residential use rather than a transient visitor serving use. Under Section 30222 of the Coastal Act, residential development is a low priority use in the Coastal Zone.

Therefore, for the reasons stated above, the proposed LUP is not in conformance with nor does it meet the requirements of the Coastal Act and must be denied as submitted.

E. VISUAL RESOURCES

Section 30251 of Coastal Act provides the principal policy for evaluating the visual aspects of the proposed LUP for conformance with the Coastal Act. Section 30251 states that the scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Development should be sited and designed to protect public views to and along the ocean and scenic coastal areas, to minimize the alteration of natural landforms, to be visually compatible with the character of surrounding areas, and to restore and enhance visual quality in visually degraded areas, where feasible.

As noted elsewhere, the proposed LUP contemplates the construction of a revetment along Strand Beach. The shoreline protective device contemplated would be visible above the sand line in varying degrees during different periods of the year. During summer, when there tends to be more sand on the beach, more of the revetment would be covered, than during winter when less sand is available to cover the revetment. In either case, the revetment would be visible by the public visiting the beach, as well as from more distant view points. Rather than visually upgrading the views that are presently degraded by the existing revetment, the proposed LUP would perpetuate the presence of the revetment. Thus, views would not be upgraded, but would continue to be degraded in a manner inconsistent with Section 30251 of the Coastal Act.

Section 30251 of the Coastal Act requires that landform alteration be minimized in new development. One purpose of minimizing landform alteration is to maintain the aesthetic qualities of the coastal zone. Minimization of landform alteration and grading also addresses other Chapter 3 Coastal Act objectives such as protecting habitat which is discussed elsewhere in these findings. Techniques to minimize landform alteration include designing new subdivisions to avoid changing significant landforms and avoiding geologically hazardous areas such as landslides and steep slopes where significant grading would be required to develop those areas. The project contemplated in the LCPA would necessitate more than two million (2,000,000) cubic yards of grading (Exhibit 7b). This grading would be necessary to prepare the Strand bluff face for residential development, including geologic remediation. In addition, a majority of the material cut from the Strand would be placed into the bowl area of the site, and graded into pads that would provide ocean views from the residential lots to be located in that area. The bluffs and the bowl constitute natural landforms that would be substantially altered by this grading. Thus, by allowing significant landform alteration, the proposed LUP is inconsistent with Section 30251 of the Coastal Act.

Also, the proposed LUP identifies several important public view points from various proposed public areas including views from the Hilltop Park and the Strand Vista Park. The City and landowner have claimed that the proposed LCP would provide new public viewing opportunities to and along the shoreline. However, the proposed LUP would allow significant grading that would alter the existing topography within the Strand and the bowl areas of the property. The City and landowner have asserted that, even though the land seaward of the proposed viewing areas would be developed, the proposed LCP would maintain public views. The IP contains building height limits (based on finished grade) and a conceptual grading plan that together are intended to implement the proposed view preservation. However, there are no policies in the LUP which mandate a particular grading plan or development configuration. Thus, the grading plan could change in a way that subsequently changes the heights of the structures to be placed on that land, subsequently causing impacts upon views from the proposed public viewing areas. Alternatively, in order to minimize landform alteration, it may be necessary to implement different structural heights rather than changing those heights by changing the landform. In order to avoid adverse impacts on public views, the LUP must contain policies which mandate the preservation of public views from the various designated areas and outline with some specificity the kind of view that must be

preserved (e.g. white water views of the ocean, views of the sandy beach, distant views of the ocean, etc.). In absence of such specificity, the LUP is inconsistent with Section 30251 of the Coastal Act and must be denied.

Therefore, for the reasons stated the LUP, as submitted, is not in conformance with nor does it meet the requirements of the Coastal Act and must be denied.

F. WATER AND MARINE RESOURCES

Marine related policies contained in the Coastal Act are principally found in Sections 30230 through 30236. These policies along with other applicable policies will be used to evaluate the conformance of the LUP with the Coastal Act. In general the marine related policies of the Coastal Act mandate that marine resources shall be maintained, enhanced, and where feasible, restored. Furthermore, they require that the biological productivity and quality of coastal waters be maintained, and, where feasible, restored, for optimum populations of marine organisms and the protection of human health.

These policies also require that the marine environment be protected from hazardous materials, limit the fill of coastal waters to eight enumerated uses, and require that the least environmentally damaging feasible alternative be implemented and that feasible mitigation be provided where such fill is to occur.

The proposed LUP raises one primary concern with the water quality protection provisions of the Coastal Act. This concern relates to how urban runoff will be captured and treated so that when it is discharged into the marine environment it will have a minimal adverse impact. Pollutants commonly found in urban runoff include: petroleum hydrocarbons, heavy metals, synthetic organic chemicals (such as pesticides, herbicides, paints and household cleaners), soap, fertilizers, yard wastes, litter, animal waste, and pathogens such as bacteria an viruses. Additionally, many coastal communities have been experiencing sewage spills due to inadequate design, aging infrastructure, and inadequate maintenance. The discharge of these pollutants into coastal waters can cause: eutrophication and anoxic conditions (resulting in fish kills and diseases), the alteration of aquatic habitat (resulting in changes to species composition and size), excess nutrients (resulting in algae blooms), increased sedimentation and turbidity which reduces the penetration of sunlight needed by aquatic vegetation which provide food and cover for aquatic species, disruptions to the reproductive cycles of aquatic species, and acute and sub-lethal toxicity in marine organisms leading to adverse changes in reproduction and feeding behavior. These impacts reduce the biological productivity and the quality of coastal waters, including streams, which reduce the optimum populations of marine organisms and have adverse impacts on human health, which can in turn severely limit public recreational access and opportunities.

The proposed LUP contains various policies that reference elements of Coastal Act Sections 30230 and 30231, but do not collectively comply with those policies. Policies

referencing Section 30230 include LUE policies 4.4, 5.26, 5.27, COSE policies 3.1 and 3.9. Policies referencing Coastal Act Section 30231 include LUE policies 5.26, 5.27, COSE Policies 1.1, 1.2, 1.4, 1.5, 1.7, and 3.10. While these include certain components of Coastal Act Sections 30230 and 30231, collectively, they do not include all components of the Coastal Act language. As an example, Policy 4.4 in the Land Use Element states:

> *Preserve, maintain, and where feasible, enhance and restore marine resource areas and coastal waters. Special protection shall be given to areas and species of special biological or economic significance. (30230)*

The introduction to the Preservation of Natural Resources Section in the LUP discussed the application of the policy, which includes providing a sense of place and openness, protecting persons and improvements from hazards, and providing recreational opportunities. Therefore, the intent of this policy, ostensibly providing for certain protections of marine resources and coastal waters is unclear given the conflict between the language and the explanation, and the policy does not seem a direct link to BMPs for water quality protection. In addition Policy 4.4 states “preserve, maintain, and where feasible, enhance and restore marine resources” which differs from Coastal Act Section 30230, which states “marine resources shall be maintained, enhanced, and where feasible, restored.” The Coastal Act policy requires enhancement regardless of feasibility, whereas the proposed LUP does not.

A second iteration of Section 30230 of the Coastal Act is found in LUE Policy 5.26 which states:

> *Protect the quality of coastal waters and human health by minimizing the potential for harmful impacts from storm water runoff (coastal act 30230, 30231)*

This policy falls short of 30231, because the LUP policy does not require that “biological productivity and the quality of coastal waters… appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained, and where feasible, restored….” In addition, it is important to protect against adverse impacts of nuisance flows (dry weather runoff) in addition to storm water runoff; the LUP mentions only storm water runoff.

In addition, Policy 3.1 of the COSE discusses the preservation of ESHA, riparian areas, wetlands, and marine refuge areas, among others:

> *Environmentally sensitive habitat areas, including important plant communities, wildlife habitats, marine refuge areas, riparian areas, wildlife movement corridors, wetlands, and significant tree stands, such as those generally depicted on Figure COS-1, shall be preserved. Development in areas adjacent to environmentally sensitive habitat areas shall be sited and designed to prevent impacts which would significantly degrade those areas through such methods as, the practice of creative site planning, revegetation, and open space easement/dedications, and shall be compatible with the continuance of those habitat areas. A definitive determination of*

the existence of environmentally sensitive habitat areas on a specific site shall be made through the coastal development permitting process. For the Headlands, the determination of native habitats will be based on the findings of the NCCP/HCP and compliance with CEQA. (Coastal Act/30230, 30240)"

This policy would provide for protections of marine life refuges, which would accomplish the goal of special protections to areas and species of special biological significance as stated in 30230; however, it is specific only to areas adjacent to ESHA. It still does not capture the requirements of 30231 to protect the biological productivity and quality of coastal waters.

In order to bring the LUP into conformance with the marine resource and water quality protection policies of the Coastal Act, numerous additional policies need to be incorporated into the LUP. Among these changes are: 1) a policy that establishes the basis for site design and source control BMPs ; 2) a policy that requires that development minimize the introduction of pollutants to coastal waters by the implementation of Best Management Practices, and that Coastal Development permit applicants submit, for review of city planning staff, water quality management plans describing the BMPs appropriate to the development and site; 3) a policy that addresses the means by which CDPs will be reviewed for their impact to water quality, including a description of how Site Design, Source Control, and Treatment Control BMPs shall be required or implemented on a development site; 4) a policy which establishes a progression approach to BMPs including site design and source control, minimizing the alteration of the hydrologic landscape, including "water quality friendly" design features, reducing impervious surfaces, and minimizing the introduction of pollutants to runoff. Subsequent to determining site design and source control BMPs, the need for and design of treatment control BMPs shall be considered; 5) For most of the Headlands, infiltration would not be possible in many areas due to concerns with geologic instability and landslides. In these instances, non-infiltration type BMPs should be used. However, in geologically stable areas, LUP policies should encourage infiltration where feasible; 6) a policy specifying review criteria for the city when reviewing a development ; 7) a policy requiring the education of site occupants and users such as residents, grounds managers, landscapers, and restaurant staff regarding the implementation of BMPs; 8) without regular inspection and maintenance, BMPs can cease to function properly; therefore, the LUP should contain a policy requiring CDPs to contain criteria for inspection and maintenance activities at such frequencies as is necessary to ensure the successful operation of the particular BMP implemented on the site.

Continuing to allow untreated urban runoff to discharge into coastal water would be inconsistent with Sections 30230 and 30231. As submitted, the LCP fails to fully conform to the requirements of Sections 30230 though 30236 of the Coastal Act regarding the protection of the marine environment. Therefore, for the reasons stated the proposed LUP is not in conformance with nor does it meeting the requirements of the Coastal Act policies regarding the protection of marine resource and must be denied.

G. ALTERNATIVES

The proposed LUP amendment would allow the City to authorize the construction of single family residences, commercial structures including a hotel, roads, parking areas, and community structures in areas that qualify as ESHA. This development would significantly disrupt the habitat values of the ESHA and would not constitute uses dependent on the resource. Thus, the proposed LUP is inconsistent with Section 30240 of the Coastal Act and must be denied. Furthermore, the proposed LUP amendment would allow the City to authorize the construction of single family residences in the Strand in an area that necessitates significant geologic remediation and construction of a shoreline protective device to protect and maintain the stability of the slope upon which the new residences would be built. This development would be inconsistent with Section 30253 of the Coastal Act. The proposed LUP is also inconsistent with several other sections of the Coastal Act identified above. Thus, the LUP must be denied.

There are alternatives to the development plan contemplated in the proposed LUP that could be found consistent with the Coastal Act. For instance, the LUP could designate the ESHA for preservation and concentrate development in the portions of the Headlands area that do not contain ESHA, such as the more level areas of the bowl. Meanwhile, the Strand could be designated for an alternative, less intense use that would not necessitate the geologic remediation and new shoreline protective device that is presently contemplated. The other inconsistencies between the LUP proposal and the Chapter 3 policies listed above could also be remedied.

In discussions with Commission staff, the City and the landowner suggested that, even if the Commission were to reject their arguments for how the proposal could be seen as being consistent with the Chapter 3 policies of the Coastal Act, it could still be approved through a balancing approach, pursuant to sections 30200(b) and 30007.5 of the Coastal Act. The Commission does not agree with the City and the landowner that the current proposal could be approved through the use of balancing because, pursuant to Section 30200(b), a balancing approach can only be invoked when there is a conflict among Chapter 3 policies. The current proposal does not present any such conflict. The Coastal Act simply requires that the plan be denied for the multiple reasons listed above.

However, the Commission does agree with its staff's conclusion that there are modified versions of the current proposal that, even though remaining inconsistent with some Chapter 3 policies, would advance resource protection as required by other policies to such an extent that it would be inconsistent to deny it, thus presenting a conflict that could be approved through the use of balancing. In order to promote a dialogue and in the interest of open decision-making, the Commission hereby presents the broad outlines of its thinking about the approvability of such alternative versions of the current proposal.

Section 30200(b) states that, "[w]here the commission . . . identifies a conflict between the policies of this chapter [Chapter 3, sections 30,200-265.5], Section 30007.5 shall be utilized to resolve the conflict." Section 30007.5 states that any conflict among Chapter 3 policies must be resolved "in a manner which on balance is the most protective of significant coastal resources." It goes on to state:

> *"In this context, the Legislature declares that broader policies which, for example, serve to concentrate development in close proximity to urban and employment centers may be more protective, overall, than specific wildlife habitat and other similar resource policies."*

For the Commission to utilize the conflict resolution provisions of Sections 30200(b) and 30007.5, the Commission must first establish that a substantial conflict between two statutory directives contained in Chapter 3 of the Coastal Act exists. The fact that a project is consistent with one policy of Chapter 3 and inconsistent with another policy does not result in a conflict. Rather, the Commission must find that to deny the project based on the inconsistency with one policy will result in coastal zone effects that are inconsistent with another policy."

The basis for a potential conflict in this case is that, as noted above, there is an existing certified LCP and a property subdivision that divides the Headlands area into small lots, some of which are wholly ESHA. In addition, the existing certified LCP contemplates development not only in the bowl area, but also further seaward, away from existing development, out upon the Headlands and Harbor Point promontories that jut out into the Pacific Ocean. Thus, there is a potential under the existing regime that development could occur that is inconsistent with both Section 30250's mandates to concentrate development near or contiguous with other development and section 30240's mandate to protect ESHA against significant disruption of habitat values, and to limit uses of ESHA to uses that are dependent on those resources. The Commission has a responsibility to consider changes that would prevent development that is inconsistent with the Chapter 3 policies of the Coastal Act.

If the current proposal were modified to require (1) the retirement of any legal lots that are wholly within ESHA and (2) re-designate land uses to ensure that no development would be approvable within ESHA, approval of the proposal would protect ESHA that may now be vulnerable, in accordance with the directive in Section 30240 of the Coastal Act. Under that scenario, there would be a statutory directive that would only be fulfilled by approval of the project. Denial of the project would forfeit the opportunity to fulfill the Commission's charge under 30240. This would create a conflict situation.

If, in addition, the proposal were modified to more clearly preserve the hilltop and the associated landform and the seaward portions of the promontory by concentrating development in the bowl and the Strand area, approval of such a proposal would also ensure that new development in the Headlands area would be as close as possible to the existing developed areas, in accordance with the directive in Section 30250 of the Coastal Act. Concentrating development in these areas has several benefits in terms of

addressing water quality issues as well as accommodating public access features. For instance, the bowl and Strand are located within the same drainage area as the existing development to the north and northwest. Storm water and low flows draining from these existing developed areas presently flow to the ocean, untreated, causing adverse impacts upon water quality. By concentrating development in the bowl and Strand areas, storm water flows from the existing developed areas and new development in the bowl and Strand can be captured by a single drainage system that incorporates water filtration devices that could treat all of the water prior to discharge to the ocean. Accordingly, approval of such an LCP would satisfy the Commission's responsibilities under both Sections 30240 and 30250.

In sum, were the Commission presented with a modified version of the current proposal that would protect all of the ESHA and concentrate all development in the bowl and Strand and away from the promontories and hilltop, there would opportunities to comply with Chapter 3 mandates that would be lost by denying the project. That would not change the fact that there would be other Chapter 3 policies that would still be violated by the proposal as a whole, most significantly by the extensive construction on the Strand in violation of Section 30253 of the Coastal Act. However, where approval of a proposal would fulfill the Commission's duties under certain provisions of Chapter 3, and denial would forfeit an opportunity to fulfill those charges; but approval would also be inconsistent with other Chapter 3 policies, the proposal presents a conflict among various Chapter 3 policies that could serve as a predicate for a balancing analysis.

The benefits to concentrating development in the bowl and Strand identified above are significant, but are not necessarily so significant, in and of themselves, as to justify authorization of a new LUP that would allow the construction of a new shoreline protective device to accommodate new development. However, once a balancing approach is adopted, the Commission can consider additional benefits of the project as well. For example, the proposal does include some significant public access improvements, such as the dedication of the Strand beach to public use. The City’s informal submittal also includes additional public access components such as a funicular, additional restrooms, and additional lateral accessways.

In sum, the Commission believes that a proposal that would protect all of the ESHA that may now be vulnerable to displacement, concentrate new development near existing developed areas, and substantially increase public access to the beach, even if it would allow for the construction of new development that requires the construction of a shoreline protective device in contravention of section 30253, may well satisfy the 30007.5 standard of being, on balance, most protective of significant coastal resources.

The Commission notes that this sort of proposal was discussed in meetings among the applicant, the landowner, and Commission staff. In this case, Commission staff felt that a proposal of the type outlined above would be most protective of coastal resources. With that in mind, Commission staff suggested to the City and landowner that, were it willing to modify its proposal in accordance with the suggestions above, Commission staff could recommend approval of such a proposal. However, the City and landowner

were unsupportive of the suggestion and rejected it. Consequently, the Commission is not now proposing this as a suggested modification with which the proposal could be approved. Moreover, because the suggestion is not formally before the Commission, the Commission has not conducted the detailed level of review necessary to conclude that such a proposal would necessarily be approvable. The Commission simply notes that such a proposal would create a conflict that would authorize the Commission to balance the competing mandates of various Chapter 3 policies and that such a balancing could be used to approve such a proposal.

VI. Findings for Denial of the City's Implementation Program Amendment

The Commission hereby finds and declares as follows. Below are the specific findings for denial of the City of Dana Point Implementation Program Amendment, as submitted.

The proposed Implementation Program consists of the City's zoning code as was previously certified for the Monarch and Capistrano Beach portions of the City; a newly added section to the zoning code to allow the creation of planned development districts (PDDs), and the proposed PDD for the Headlands. The PDD is the IP and not the LUP. Thus, the standard of review for the IP including the PDD is the LUP. As noted above, the LUP is being denied due to inconsistencies with Sections 30240, 30253, 30230, 30231, 30213, among others. Since the IP is substantially reliant upon the certification of the proposed LUP, which is being denied, there is no logical way to review the IP for conformance with the LUP. One alternative would be to review the proposed IP for conformance with the existing certified LUP (i.e. the 1986 LUP). However, the land use designations and goals of the land use plan are substantially different than the proposed IP. The proposed IP would be unable to carry out and implement the 1986 LUP. Thus, the proposed IP must be denied.

VII. Consistency with the California Environmental Quality Act

Section 21080.5 of the California Environmental Quality Act (CEQA) exempts local governments from the requirement of preparing an environmental impact report (EIR) in connection with a local coastal program (LCP). Instead, the CEQA responsibilities are assigned to the Coastal Commission. Additionally, the Commission's Local Coastal Program review and approval procedures have been found by the Resources Agency to be functionally equivalent to the environmental review process. Thus, under Section 21080.5 of CEQA, the Commission is relieved of the responsibility to prepare an environmental impact report for each local coastal program submitted for Commission review and approval. Nevertheless, the Commission is required when approving a local

coastal program to find that the local coastal program does conform with the provisions of CEQA.

The proposed LCP amendment has been found not to be in conformance with several Coastal Act Policies regarding public access, protection of the marine habitat, protecting environmentally sensitive habitat areas, promoting visitor serving uses, protecting visual resources, and minimizing the impact of development in hazardous locations. Thus, the LCP amendment is not adequate to carry out and is not in conformity with the policies of Chapter 3 of the Coastal Act. Furthermore, the proposed LCP amendment would result in significant adverse environmental impacts within the meaning of the California Environmental Quality Act.

Relative to the Implementation Program, the Commission finds that approval of the Implementation Program, as submitted, will result in significant adverse environmental impacts under the meaning of CEQA.

The Commission finds that the City of Dana Point Local Coastal Program Amendment 2-02 will result in significant unmitigated adverse environmental impacts under the meaning of the CEQA. Further, future individual projects will require coastal development permits issued by the City of Dana Point. Throughout the coastal zone, specific impacts associated with individual development projects are assessed through the coastal development permit review process; thus, without an adequate LCP, an individual project's compliance with CEQA cannot be assured. Therefore, the Commission finds that there are feasible alternatives within the meaning of CEQA that would reduce the potential for significant adverse environmental impacts. Therefore, the proposed LCPA must be denied.

VIII. List of Exhibits

Exhibit #	Category	Description	Manner Supplied * = Web Site # = Printed Edition @ = Under Separate Cover
1		Project Location	#
2a	**Existing Conditions**	Major Land Features/Areas	#
2b		Existing Structures	#
2c		Existing Revetment	#
2d		Existing Tract Maps	#
3a	**Existing LCP**	LCP Areas	#
3b		Dana Point Specific Plan LCP ("1986 LCP"): Excerpts Relative to the Headlands	#
3c		CCC Findings Adopting 1986 LCP: Excerpts Relative to the Headlands	#
4a	**Proposed LCP Amendment**	Resolution of Adoption and Submittal of LUP Amendment	#
4b		Resolution of Adoption of General Plan Amendment	#
4c		Resolution of Adoption of Zone Text Amendment	#
4d		Resolution of Adoption and Submittal of IP Amendment	#
4e		Resolution of Adoption and Submittal of PDD Guidelines	#
4f		Map of City Upon Certification of LCP Amendment	#
5a	**Proposed LCP Amendment**	Land Use Plan Map	#
5b		PDD – Planning Areas	#
5c		Comparison of 1986 LCP with Proposed Amended LCP	#
6a	**Informal City Modifications to LCP Amendment**	Letter from City	#
6b		Existing Vegetation and Proposed Modified Land Use Plan	#

Exhibit #	Category	Description	Manner Supplied * = Web Site # = Printed Edition @ = Under Separate Cover
7a	**Development Contemplated Under Proposed LCP Amendment**	Proposed Revetment	#
7b		Proposed Grading	#
8a	**Technical Analyses/Evaluations of Shoreline Protective Device/ Revetment in the Strand**	Seymour, Richard J., Ph.D., P.E. 2003. Assessment of Improvements to the Existing Headlands Development & Conservation Plan (HDCP) Shoreline Protection. Dated August 2003	#
8b		Jenkins, Scott. A., Ph.D., and Wasyl, Joseph. 2003. Comparative Analysis of Beach Change Effects Due to a Seawall Alternative for the Headlands Development & Conservation Plan, Dana Point, California. Dated September 10, 2003	#
8c		Wiegel, Robert L. Undated. Peer Review of Reports on Coastal Engineering Aspects of the Headlands Development and Conservation Plan, Dana Point, Orange County, California.	#
8d		Jenkins, Scott. A. Ph.D., and Wasyl, Joseph. 2002. Constraints and Unique Characteristics Effecting Non-Structural Shore Protection Alternatives for the Dana Point Headlands Development and Conservation Plan. Dated November 17, 2002.	#
8e		Noble Consultants. 2002. No Revetment, Shorefront Slope Setback Alternative. Dated November 20, 2002.	#
8f		Carey, Paul. S., P.E. 2002. Headlands Development and Conservation Plan Shorefront Slope Setback Alternative. Dated November 20, 2002.	#

Exhibit #	Category	Description	Manner Supplied * = Web Site # = Printed Edition @ = Under Separate Cover
8g		Jenkins, Scott A. 2003. Headlands Development and Conservation Plan (response to Surfrider Letters dated March 19, 2003 and March 14, 2003). September 19, 2003	#
9a	**Surfrider Foundation Comments**	Letter dated August 14, 2003 regarding Petition Transmittal	#
9b		Marra, John J. 2003. Review of Report Pertaining to Headlands Development and Conservation Plan by S.A. Jenkins and J. Wasyl	#
9c		Maddux, Timothy B. Undated. Review of "Evaluation of Coastal Processes Effects Associated with Removal of the Revetment from the Headlands Development and Conservation Plan"	#
9d		Letter dated March 17, 2003 from Chad Nelson, Surfrider Foundation to Karl Schwing, California Coastal Commission regarding shoreline protection and the offshore kelp beds	#
9e		Letter dated December 26, 2002 from Michael Lewis, Surfrider Foundation to Ralph Faust, California Coastal Commission regarding Response to letter from Joseph Petrillo with Sheppard Mullin Richter & Hampton LLC dated November 11, 2002	#
10a	**Coastal Commission Technical Staff Comments Relative to Coastal Processes and Geologic Hazards**	Memo dated September 19, 2003 by Lesley Ewing, Senior Coastal Engineer	#, *
10b		Memo dated July 21, 2003 by Lesley Ewing, Senior Coastal Engineer	#,*
10c		Memo dated July 8, 2003 by Mark Johnsson, Staff Geologist	#, *
10d		Memo dated September 16, 2002 by Mark Johnsson, Staff Geologist	#, *

Exhibit #	Category	Description	Manner Supplied * = Web Site # = Printed Edition @ = Under Separate Cover
11a	**NCCP/HCP Central and Coastal Subregion**	Findings of Facts in Support of Findings Regarding the Central and Coastal Subregion Natural Community Conservation Plan/Habitat Conservation Plan Joint Programmatic Environmental Impact Report No. 553 (SCH No. 93071061) and Draft Environmental Impact Statement 95-59 dated April 9, 1996: Selected Excerpts	#
11b		NCCP/HCP dated April 14, 1997 and April 11, 2000: Selected Excerpts	#
11c		Map depicting the NCCP/HCP Reserve System and the Coastal Zone Boundary	#
12a	**Pacific Pocket Mouse**	URS. 2002. Dana Point Headlands Pacific Pocket Mouse Survey, August 18-Septmber 1, 2002, dated September 19, 2002	#
12b		URS. 2002. Update on the Current Status and Viability Assessment of Pacific Pocket Mouse Population on Dana Point Headlands, dated September 18, 2002	#
13a	**Native Vegetation**	Letter from Pat Mock, URS, with attachment to John Dixon, CCC dated August 8, 2003	#
13b		Letter from W. Kevin Darnall, Headlands Reserve LLC to Caitlin Bean CCC dated June 12, 2003	#
13c		Letter from Fred Roberts, CNPS, to Karl Schwing, CCC dated June 9, 2003	#
13d		Letter from Tony Bomkamp, GLA to Mike Reilly, CCC dated April 15, 2003, re: response to Fred Roberts Letter dated January 28, 2003	#
13e		Letter from Fred Roberts, CNPS to Mike Reilly, CCC dated March 3, 2003 re: status of Blochman's dudleya	#

Exhibit #	Category	Description	Manner Supplied * = Web Site # = Printed Edition @ = Under Separate Cover
13f		Letter from Tony Bomkamp, GLA to Meredith Osborne, CDFG dated February 10, 2003, re: relocation of Blochman's dudleya and response to Fred Roberts letter dated June 27, 2002	#
13g		Letter from Fred Roberts, CNPS to Mike Reilly, CCC dated January 28, 2003	#
13h		Letter from Fred Roberts, CNPS to Meredith Osborne, CDFG dated June 27, 2002	#
13i		Letter from CNPS to City of Dana Point dated February 9, 2002 with letter attached dated November 16, 2001	#
14a	**Comments from CDFG and USFWS**	Memo from Eric Larsen, CDFG to Karl Schwing, CCC dated August 7, 2003	#
14b		Letter from William E Tippets, CDFG and Karen A. Goebel, USFWS to Mike Reilly, CCC dated March 28, 2003	#
14c		Letter from William E. Tippets, CDFG to John Dixon and John Allen, CCC dated February 15, 2002	#
15a	**Coastal Commission Technical Staff Comments Relative to Upland Biological Resources**	Memo by John Dixon dated September 18, 2003	#, *
15b		Memo by Caitlin Bean dated June 26, 2003	#, *
15c		Map depicting location of ESHA (as updated by Exhibit 15a) and Land Use Areas (as submitted by City Council May 2002)	#
15d		Map depicting biological resources(as shown on City's original submittal) and location of ESHA	#
15e		Map depicting biological resources (as updated by new Landowner surveys) and location of ESHA	#

Exhibit #	Category	Description	Manner Supplied * = Web Site # = Printed Edition @ = Under Separate Cover
16	**Headlands Promontory Park Endowment**	Letter from Center for Natural Lands Management dated August 26, 2003	#
17a	**Coastal Commission Staff Comments Relative to Planning Efforts Involving the Headlands**	Chronology	#
17b		Draft EIR (Current Plan) Comments dated November 21, 2001	#
17c		Draft LCP Comments (Current Plan) dated November 21, 2001	#
17d		Draft EIR Comments (1998 Plan) dated September 5, 1998	#
17e		NOP for Draft EIR Comments (1998 Plan) dated June 12, 1998	#
17f		EIR/EIS Comments on NCCP/HCP dated January 29, 1996	#
17g		Draft EIR Comments (early 1990 plan) dated July 29, 1993	#
18a	**Legal Analyses**	Letter from City Attorney (Rutan & Tucker LLP) dated August 19, 2003	#
18b		Letter from Sheppard Mullin Richter & Hampton LLP dated August 11, 2003	#
18c		Letter from Sheppard Mullin Richter & Hampton LLP dated January 13, 2003	#
18d		Letter from Sheppard Mullin Richer & Hampton LLP dated November 11, 2002	#
19	**Letters in Support of City-Proposed Plan**		#
20	**Letters of Critique of City-Proposed Plan**		#
21	**Letters in Opposition to City-Proposed Plan**		#

Exhibit #	Category	Description	Manner Supplied * = Web Site # = Printed Edition @ = Under Separate Cover
22	**Proposed 1996 Land Use Plan to be newly applied to Headlands**	Land Use Element	@
		Urban Design Element	@
		Conservation Open Space Element	@
23	**Proposed 1996 IP to be newly applied to Headlands**	Zoning Code	Available Upon Request
24	**Headlands Development & Conservation Plan including changes and additions to 1996 LUP and IP (Adopted and Submitted by Resolution of the City Council)**	Chapter 1.0 - Changes to the 1996 Land Use Element, Urban Design Element, and Conservation Open Space Element to allow Headlands Plan to proceed	@
		Chapter 2.0 – Adds Chapter 9.34 to the City Zoning Code which allows City to Create PDDs	@
		Chapter 3.0 – The Headlands PDD	@
		Chapter 4.0 – Development Guidelines for Headlands PDD	@
		Chapter 5.0 – Coastal Act Consistency Analysis	@
25	**Headlands Development & Conservation Plan (Modifications Suggested by City Staff and Landowner) Not Submitted Via Resolution of the City Council**	Chapter 1.0	@
		Chapter 2.0	@
		Chapter 3.0	@

CALIFORNIA COASTAL COMMISSION
45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105- 2219
VOICE AND TDD (415) 904- 5200
FAX (415) 904- 5400

September 19, 2003

TO: Karl Schwing, Supervisor
Long Beach Office, CCC

FROM: Lesley Ewing
Senior Coastal Engineer

SUBJECT: City of Dana Point LCP and Dana Strand Beach

Since my 21 July 2003 Memorandum concerning the City of Dana Point LCP, we have received several other letters that merit some written input. In reading these new submittals, I do not think there is any need to change anything that was in my initial memorandum. This current memorandum is a supplement to that earlier memorandum and not a replacement. New material on this project is:

- Comparative Analysis of Beach Change Effects Due to a Seawall Alternative for the Headlands Development and Conservation Plan, Dana Point, California (10 September 2003) by Scott A. Jenkins, PhD & Joseph Wasyl, for Headlands Reserve, LLC.

- Assessment of Improvements to the Existing Headlands Develop and Conservation Plan (SDCP) Shoreline Protection (August 2003) prepared by Richard J. Seymour, Ph.D., P.E. for Headlands Reserve, LLC.

Shoreline Changes with a Revetment or with a Vertical Wall: The report by Jenkins and Wasyl provides results from an effort to model future shoreline change at Dana Strand Beach, with a vertical wall and with a rebuilt revetment. The report concurs that a vertical wall would occupy less beach than a revetment and that more beach area could be available with a vertical wall than with a revetment. It concludes however, that, "the ephemeral gains in beach width derived from the set back of an alternative seawall concept, which cannot be predicted to remain in place over the long-term, cannot be worth the risk of potentially disturbing the long standing littoral equilibrium that has existed at this beach since the 1950's." Jenkins & Wasyl modeled shoreline change using wave data from 1980 – 2000, and showed a massive loss of beach if conditions similar to the 1982/83 El Niño storms are repeated. The 1982/83 storms occurred early in the 1980 to 2000 period that is used to model shoreline change, and the presentation of the results suggests that whatever beach was there would vanish soon after it was available. The casual observer would believe that the modeling is showing that the gains in beach width from a vertical wall would be lost within 3 years of construction. However, the Jenkins & Wasyl effort is not making any representation of future wave conditions, or the return period for a major El Niño event. It compares possible beach changes for wave conditions equivalent to the period from 1980 to 2000 for a vertical

wall and for a revetment. It does not compare any model results to measured beach conditions. If a massive erosional event were not to occur until a vertical wall had been in place for 20, 40 or 50 years, the "ephemeral gains" shown by the model, would be appreciated for several decades.

The Jenkins & Wasyl's modeling effort shows that the beach fronting a vertical wall would not recover as quickly as the beach fronting a revetment, due to the difference in reflexivity of the two wall types. Field studies reported by Griggs, et al. and Tait and Griggs (both cited in Jenkins and Wasyl as "contrary studies") found that for sediment rich areas like Monterey, there was little difference in the recovery rates between a vertical wall and a revetment. The Dana Strand Beach is not in a sediment rich cell and Jenkins & Wasyl note that the morphological differences between Dana Strand Beach and the beaches in Monterey make studies of Monterey invalid for the Dana Point area. Instead, Jenkins & Wasyl compare the Dana Strand Beach to narrow wave-cut platform beaches in San Diego. While similar in planform, the San Diego beaches have an estimated annual longshore transport rate that is between 200,000 and 300,000 cyy. The alongshore sediment flux for rate for the Dana Strand Beach sub-cell is an order of magnitude less, being closer to 15,000 cyy. So, while they are not sediment rich beaches, they also do not require several hundred thousand cubic yards of sediment each year to maintain longshore transport. The beach can rebuild with only a small amount of sand. At best, it is possible to say that the rates at which Dana Strand Beach will rebuild fronting a vertical wall and a revetment for this beach area are uncertain. Following a major storm event, the beach fronting a revetment may possibly rebuild more quickly that a beach fronting a vertical wall, but in either situation, the model predicts that the beach would rebuild.

For purposes of the LCP, a vertical wall is a viable solution for a shoreline protective device along Dana Strand Beach. As adjacent properties redevelop and need to rework their shoreline protection, a seawall may again be a viable option for these areas. The pros and cons of each alternative can and should be considered in examination of any development option for The Strand. I do not believe the Jenkins & Wasyl report provide evidence that the LCP should consider only a revetment for any future development that might be proposed for The Strand.

Changes to the Revetment being Repair or Reconstruction/New Construction: The amount of work necessary to provide an effective shoreline protective device for the new houses that are proposed to be built on The Strand constitutes complete reconstruction or new construction. Much of the rock can be used again – one virtue of rock is that it can be taken from place to place and put into riprap structures again and again. It can be used in a new revetment at this site, it can be hauled upcoast to be used for maintenance there, it can hauled out of the county, it can be crushed and used for road construction. The idea that the future revetment will be built using rip rap rock that is now on site, does not, in itself mean that the future revetment will be a repair of the current revetment.

In conjunction with development of The Strand, there will be a huge amount of grading, landform alteration, cut, fill, and recompaction all along The Strand. At the beach, the entire existing revetment, except for a short segment at the southern end, will be completely removed. There would be heavy equipment on the beach to lift and remove the riprap rock from its current location and store it elsewhere while the back slope and foundation area are being prepared. Very likely the riprap rock will be stored on the beach, in a way that it can serve as a cofferdam and protect the work that is occurring to the east. The project has not presented construction plans, so this is speculation as to where and how the riprap rock would be stored. The project plans show that most of the slope adjacent to the future revetment will constructed of compacted fill and other site plans note that the fill would come from cuts further up on the slope. Seaward of the compacted fill, there would be a 20-foot thick surface of Geosynthetically-Reinforced Compacted Fill[1]. This Geosynthetically-Reinforced Compacted Fill would start at elevation 0', NGVD and extend up the slope to +25' NGVD. There is not a Geosynthetically-Reinforced Compacted Fill on the slope at present. This would all be constructed as part of the proposed development, and would likely require that heavy equipment operate on the beach during the construction phase.

The revetment would be installed or reinstalled, seaward of the constructed, Geosynthetically-Reinforced Compacted Fill. The design developed by Noble Consultants shows that there would be a layer of fabric filter placed adjacent to the Geosynthetically-Reinforced Compacted Fill and along the 0' NGVD, at the bedrock contact, to support the revetment. Seaward of the fabric filter will be a be a layer of small rock, Class No. 2 backing, and then the rip rap rock will be placed back on the slope. If the current revetment is resting on the bedrock layer, the fabric filter, small rock and armor rock could be placed on the bedrock that had been covered by the current riprap rock. If the current revetment is not founded on bedrock, then there would be some additional excavation beyond removal of the rip rap rock to expose the bedrock and allow construction of the future revetment in the manner specified in the proposed plans.

There are various methods for doing this construction, and the proposed method may differ from what is described here. However, I know of no way to do the proposed slope recompaction, installation of a Geosynthetically-Reinforced Compacted Fill, installation of a fabric filter layer and installation of Class #2 rock base, without temporarily relocating the rip rap rock. The ultimate project will have some similarity to the existing revetment in that the plans indicate that all new work can be undertaken so that the toe of the existing and proposed revetment footprint will be at the same seaward limit. Furthermore, there have been proposals to keep the proposed revetment at the +17' elevation – supposedly the elevation of the current revetment, if it had been maintained. The work will not be the placement of a few additional rocks here and there within the structure, as suggested by the Jenkins & Wasyl Report through comparison of this work with a revetment repair project in Encinitas. The amount and extent of work would constitute complete reconstruction/new construction of a shore protection device.

[1] Shown on Noble Consultants, Figure 2, Revetment Section, provided in the July 30, 2003 Dana Point Headlands LOCAL Coastal Program Amendment Binder.

Potential Changes to Sediment Yield with Development on The Strand: The Jenkins & Wasyl report notes that there will be minimal changes to the storm water derived sediment supply from this project. This connection to storm water runoff may exclude the unquantified amount of talus that is washing off The Strand, over or through the revetment, and into the littoral system. Work by Everts and referenced by Jenkins, has noted that the bluffs along this portion of the littoral cell do provide sediment to the littoral system something less than about 1,100 cubic yards per year (cyy). Most of the sand coming into The Dana Strand Beach segment is from upcoast or from this sea cliff erosion. There are no fluvial sources for sediment into The Dana Strand Beach. The general estimate of sediment yield for undeveloped and developed foothill lands (probably a good approximation for slope inland of the Strand Beach, is 200 and 100 cyy, per square mile of land. The conversion of this land from its essentially undeveloped condition to the compacted, graded, developed slope, will reduce annual sediment yields by 50%. The new shoreline protection device will contain the backshore sediments better than the structure that is there now. The talus that is now flowing over and through the revetment will be reduced or almost eliminated. This beach relies on small volumes of sand to exist and these small reductions could adversely impact the beach over the long term. Fortunately, it would take only small amounts of sand to bring this area back into "equilibrium".

Changes to the Back Beach and Effects from a Change in Sea Level: The Coast of California Storm and Tidal Waves Study for Orange County looked at sea cliff retreat for the southern cells in Orange County. The study found that, "Mean beach widths have not changed greatly since 1927. Shoreline positions are generally near where they were 70-years ago and in this period back beach line retreat rates averaged only an estimated 0.07 to 0.2 ft/yr." The area near Dana Point was one of the areas with a retreat rate close to 0.2 ft/yr (at 0.17 ft/yr). This beach is at about its maximum holding capacity for sand, meaning that the beach cannot widen by moving seaward. The beach has been held at its current location since the 1950's when the current revetment was installed. Assuming that the shoreline had not been armored, and assuming that there would not have been a massive slide during the past 50 years, the current back beach line would be approximately 10 feet further landward than it is now (0.2 ft/yr x 50 years). Over the next 75 years, the shoreline could be expected to retreat an additional 15 feet, with the same assumptions.

The Dana Strand Beach is within the Mussel Cove to Dana Point reach, and it has an average shore face slope of 0.033 rise to run. In the design of the proposed shore protection, Noble Consultants has assumed that there could be a rise in sea level above the current level, of 0.66 feet in 75 years. On a beach with a 0.033 shore face slope, this would "inundate" 20 feet of beach, on average, more than is inundated today. This estimate is based only on the change in water elevation relative to the existing beach, and does not account for possible shifts in sediment on the shore face that would otherwise modify the location of the shoreline.

The Coast of California Storm and Tidal Wave Study for Orange County, discusses many of the changes that can occur to the shoreline over time and how a future rise in sea level could alter the shoreline dynamics

> "On a time scale of years or decades, the flux across the base of the lens is usually small in comparison to transport across other boundaries of the lens. Exceptions include some conservative, headland-bounded pocket beaches where (1) the back beach line is restrained to erosion and sea level is rising so thereby the flux is negative." (Page 40)
>
> "There is at present a negative sediment flux of about 2000 cyy at the base of the lens. This is the quantity required to support the lens as the sea surface rises. This negative component of the budget will increase as the length of armored coast expands and the rate of sea level rise accelerates in future, if that occurs. ...
>
> "To demonstrate the worst case scenario.... the complete armoring of the southern Orange County coast would shift the present positive sediment budget (an estimated 8200 cyy) to a negative budget of about -8000 cyy. .... Many of the beaches of southern Orange County would disappear in around 100 years." (Page 59)

Sea level change has been factored into the proposed design for shore protection. The elevation of the revetment was based upon a 0.66 foot rise in mean sea level over the next 75 years. And, as noted in the Seymour Report, "One of the principal advantages of the revetment or rubble mound structure for the shoreline protection on a sloping hillside is that it can readily be designed to accommodate substantial increases in height without necessitating further encroachment on the beach." The proposed revetment will go to +17' NGVD. The proposed design would meet current state-of-the-art standards for shoreline protection; however, the LCP does not address the sea level component for the design conditions for new shoreline protection, or any other design condition. Few LCP's provide this information, so the lack of design standards is not an oversight that is unique to this LCP.

The proposed plan does not indicate whether an added rise in sea level, beyond the 0.66' that was considered, could be accommodated within the current design. As noted by the Seymour Report, these structures can be designed to accommodate increases in height; the proposed revetment may or may not have been designed for this. However, if the proposed revetment were increased in height, it could take up the area that would be used for the public walkway that is being considered at the top of this structure. Any design that would contemplate an increase in height of shore protection would need to also contemplate an adjustment that would maintain the quality and extent of public access.

Option of Abandonment or No Action: The Seymour Report discusses many of the perceived benefits that could arise from rebuilding the revetment to modern standards

The first is that it "would allow the development of high value taxable properties between the public road and the beach, and will not impinge on the public viewsheds." It is clear that this site should not be used for the proposed type and level of development unless some form of shoreline protection is included with the project. New shore protection would allow this property to be put to a high value taxable use. However, this new development would impinge on the public viewshed. The beach and nearshore surf zone are heavily used public areas and the view of the coast from these areas would be dramatically changed if the proposed housing complex is constructed.

The Seymour report further notes that the proposed project would result in no adverse impact to erosion, the beach width, or sand supply. This issue was covered in the 21 July 2003 memo and elsewhere in this memo. Fortunately, this shoreline has been relatively stable over the past 50 years and there is still a healthy and useful beach. Shore protection will change the beach and backshore from what would occur without these structures. The benefits and impacts from these changes have been presented elsewhere.

Many of the other benefits that would result from a new revetment at this site could be achieved with out a new 2,100-foot long shoreline protection device. The LCP amendments have been directed at the creation of new, stable home sites on the lands immediately inland of The Dana Strand Beach. The provisions of new access, water quality improvements, etc. have been presented within the context of this new development, but there is no technical reason that they must be joined. Other options for the use of this land would likely consider other beneficial "packages" that would be possible for this property. The current proposal has not considered the appropriate types of shoreline protection that would provide water quality improvements, ADA access, dedication of public beach lands, three stable beach access paths, and protection of the neighboring developments, separate from providing developable lots.

CALIFORNIA COASTAL COMMISSION
45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105- 2219
VOICE AND TDD (415) 904- 5200
FAX (415) 904- 5400

July 21, 2003

TO: Karl Schwing, Coastal Program Manager, Orange County

FROM: Lesley Ewing, Sr. Coastal Engineer

SUBJECT: Coastal Engineering Review of Dana Point Headlands LCP Amendment

My review and comments concerning the coastal engineering aspects of this LCP Amendment are based on my professional judgment, review of the following listed documents, a site visit conducted on 20 February 2002, and numerous phone conversations and conference calls. The formal document review has included:

- Headlands Reserve LLC, "The Headlands Development and Conservation Plan, General Plan Amendment", July 24, 2001
- AGRA Earth & Environmental, Inc., "Geotechnical Evaluation Feasibility of Landslide Remediation, Dana Strand Club Area, Dana Point Headlands Project," October 15, 1999.
- AGRA Earth & Environmental, Inc., "Geotechnical Review Response Feasibility of Landslide Remediation Dana Point Strand Club Area, Dana Point Headlands Project, Dana Point, California," February 4, 2000.
- AGRA Earth & Environmental, Inc. "Bluff Setback Evaluation Harbor Point Are of Lower Headland Dana Point Headlands Project, Dana Point, California," February 21, 2000.
- AGRA Earth & Environmental Inc. "Addendum Geotechnical Evaluation Feasibility of Landslide Remediation Dana Strand Club Area, Dana Point Headlands Project," March 21, 2000.
- LSA Associates, Inc. "Final Environmental Impact Report, Volumes I, II and III. February 2002.
- Noble Consultants, Inc. prepared for LSA Associates, "Final Environmental Impact Report, Appendix J: Coastal Processes Assessment for Headlands Development and Conservation Plan," September 2001.
- Noble Consultants, Inc. "Headlands Development and Conservation Plan, Supplemental Assessment for Shorefront Protection Alternatives, Dana Point, CA." May 2002.

- Scott A. Jenkins, Ph. D. and Joseph Wasyl; Dr. Scott A. Jenkins Consulting, Evaluation of Coastal Processes Effects Associated with Removal of the Revetment from the Headlands Development and Conservation Plan:" 22 May 2002.

- MBC Applied Environmental Sciences, "Analysis of Impacts to the Niguel and Dana Point Marine Life Refuges Resulting from the Alternatives to the Strand Beach Revetment Reconstruction" June 2002.

- Scott A. Jenkins, PhD & Joseph Wasyl, Constraints and Unique Characteristics Effecting Non-Structural Shore Protection Alternatives for the Dana Point Headlands Development and Conservation Plan," 17 November 2002.

- Robert L. Wiegel, Consulting Engineer, "Peer Review of Reports on Coastal Engineering Aspects of the Headlands Development and Conservation Plan, Dana Point, Orange County, California," 20 March, 2003, as amended on March 21, 2003 letter from Kevin Darnall.

- City of Dana Point, "Local Coastal Program Amendment (LCPA 01-02), May 30, 2002.

- City of Dana Point, "General Plan" July 9, 1991.

- City of Dana Point, "Zoning Code," through Zoning Ordinance 01-04, March 27, 2001.

- AMEC Earth & Environmental, Inc. "Headlands Development and Conservation Plan, Geotechnical Evaluation of Shorefront Design Alternatives (Planning Areas 1, 2, and 3) Dana Point, California," May 2002.

- AMEC Earth & Environmental, Inc. "Headlands Development and Conservation Plan, Geotechnical Evaluation of Conceptual Shorefront Setback Alternative (Planning Areas 1, 2, and 3) Dana Point, California," November 2002.

- AMEC Letter Report from Scott Kerwin to Kevin Darnall, "Response to Geotechnical Review Memorandum Headlands Development and Conservation Plan (HDCP)," November 20, 2002.

- Paul S. Carey, P.E., The Keith Companies, Inc. "Headlands Development and Conservation Plan: Shorefront Slope Setback Alternative," November 20, 2002.

- Noble Consultants, Inc. "Headlands Development and Conservation Plan: No Revetment, Shorefront Slope Setback Alternative, Dana Point, CA" November 20, 2002.

- Memorandum from Headlands Reserve LLC to Lesley Ewing, "Responses to the August 12, 2002 Memorandum from Leslie (sic.) Ewing," November 21, 2002.

- Letter from Michael Lewis, Surfrider Foundation, to Ralph Faust, "Response to: Headlands LCP Amendment, Strand Area and Revetment Issues, Dana Point Headlands," December 26, 2002.

- Timothy B. Maddux, PhD, "Review of 'Evaluation of Coastal Processes Effects Associated with Removal of the Revetment from the Headlands Development Conservation Plan'," N.D.

- Letter Report from Chad Nelsen, Environmental Director, Surfrider, to Karl Schwing, March 17, 2003.

- Letter Report from John J. Marra, PhD to Mark Rauscher, Environmental Programs Manager, Surfrider Foundation, "Review of Report Pertaining to Headlands Development and Conservation Plan by S.A. Jenkins, Ph.D. and J. Wasyl," March 3, 2002 (sic.)

- Wiegel, Robert L., Professor Emeritus, "Dana Point Harbor, California," Shore and Beach, Vol. 61, No. 3, July 1993, pages 37 – 55.

- Griggs, Gary, James Tait, and Wendy Corona, "The Interaction of Seawalls and Beaches: Seven Years of Monitoring, Monterey Bay, California" Shore and Beach, Vol. 62, No. 3, July 1994.

- California Coastal Commission, Revised Findings, A-2-PAC-00-010, City of Pacifica, November 27, 2002.

Introduction:

The project before staff is proposed amendments to the LCP for Dana Point that add policies for the development of the Headlands property. The specific amendments that are covered by this memo are: Proposed Policy 1.25: "For the Headlands, minimize the potential for coastal slope erosion and ensure public safety and coastal access by reconstructing the existing revetment." And Proposed Policy 2.14: "Shoreline or ocean protective devices such as revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, and other such constriction that alters shoreline processes shall be permitted when required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion, and when designed to eliminate or mitigate adverse impacts on local sand supply and minimize adverse impacts on public use of sandy beach areas. **For the Headlands, the potential for coastal slope erosion shall be minimized and pubic safety and coastal access protected by reconstruction of the existing revetment. Such reconstruction must not encroach seaward of the toe of the existing revetment at bedrock unless improvements are necessary to create or enhance new public access and/or public safety.** (Bold language is the proposed change to Policy 2.14.)

If these amendments are approved, the Dana Point Development Project would propose to undertake remedial grading of The Strand, replace the existing revetment with a new shore

protection device, develop The Strand for residential use and various other projects on and adjacent to Dana Point Headlands. The LCP amendments, while separate from the proposed development, nevertheless, have a strong connection to the proposed development. To the extend possible, I have tried to limit my comments to the LCP. To facilitate staff's review of the LCP amendments, I am addressing the following questions:

1. Can the existing revetment be repaired in a way that it would be adequate to protect new development, or must a new revetment be constructed?
2. Do either the existing revetment or the proposed new revetment alter shoreline processes?
3. Are there options other than the proposed new revetment?
4. Is it likely that the No Shore Protection option could generate a large sediment plume?
5. Has the submitted work been performed in a manner that is consistent with Industry Practice?

The following discussion addresses these questions. This memo is a companion to a geologic memo prepared by the Commission's staff geologist. The companion memo addresses the geologic conditions of the inland site, the overall site stability and the options for developing the site for residential use that do not rely on any type of shoreline protection. This memo will cover only the above-mentioned concerns.

1. Existing Revetment and Need for New Shore Protection

There is an existing 2,240-foot riprap revetment on the property that pre-dates the Coastal Act. The southern end of this revetment terminates at the general junction between The Strand Beach and the Dana Point headland. Approximately 140 feet of the revetment in this area is buried by sand. Approximately 2,100 feet of the revetment is exposed, with the extent of exposure changing with the levels of beach sand seaward of the revetment and amounts of talus from the inland slope. The northern end of the revetment connects with revetments that extend, in a linear fashion, several thousand feet further to the north. Riprap revetment structures of varying ages and levels of maintenance or disrepair now fix most of the backshore from Monarch Point (to the north) to Dana Point (to the immediate south).

The revetment backing The Strand Beach has fallen into disrepair. The applicant notes that portions of this revetment were repaired following the 1982/83 El Niño. These repairs extended the life of this structure allowing much of the backshore of The Strand Beach to be protected still today, to some extent, by this revetment. For approximately the past 40 years, the shoreline at The Strand, and much of the shoreline to the north, has been armored and has been influenced by this armoring.

Noble Consultants has preformed a detailed investigation of the existing revetment at The Strand Beach. Their investigation found, "that the under-engineered riprap structure was not designed under current engineering standards that are based on the most updated nearshore wave climate and a design cross section comprised of bed material and armor stone." (Noble Consultants, September 2001, pages 19 – 25). "At Strand Beach, the existing under-designed riprap revetment may be damaged and stones could be dislodged onto the beach during a moderate to severe storm event." (Ibid, page 29) Based on my inspection of the riprap revetment during the

20 February 2002 site visit and the various reports on the revetment and reports on its damage from past storm events, I concur with the Noble Consultant's assessment of the condition of the existing revetment that it is in disrepair.

In a report by Jenkins and Wasyl, they note that the wave climate at Dana Point is very harsh and through a quantitative analysis they have determined that the wave energy arriving along The Strand is "more than 10 times greater than wave energy along the shores of Santa Barbara, Santa Monica, Redondo Beach and Huntington Beach." (Jenkins and Wasyl, 17 November 2002, page 1) I have not verified that the wave energy is actually 10 times greater at The Strand Beach than at all locations along the listed shorelines. This would mean that the wave heights at Dana Point are routinely more than 3 times higher than the waves in Santa Barbara, Santa Monica, Redondo Beach and Huntington Beach. However, since the listed locations have generally wide beaches with a wide offshore shelf, and The Strand Beach is a narrow pocket beach on a bedrock planform, the shoreline characteristics support the idea that the wave energy at The Strand is somewhat larger than the other locations. In addition the "Killer Dana" tales of surfing at Dana Point before the harbor was built also provide support for the claim that the wave climate in the area of The Strand Beach (slightly northwest of the location of the renowned surfing waves) can be quite large and there is high wave energy along The Strand Beach.

The LCP amendments propose that the existing revetment should be reconstructed to minimize the potential for coastal slope erosion. The LCP amendment also notes that the revetment should be rebuilt to ensure public safety and coastal access. It might be possible to achieve these policy goals of public safety and access by repairing and maintaining the existing revetment, without full reconstruction. There are no specific design standards for such conditions; however staff could work with the city to set some criteria for repair and maintenance of the existing revetment that would provide some reasonable level of public safety and access. In addition, the existing access way, storm drains, etc. that are on the site, could continue to be protected for a number of years by careful repair of the existing revetment.

If the purpose of shore protection is to minimize the potential for coastal erosion to a level adequate to use the inland area for the proposed residential development, there are specific guidelines and minimum safety standards for this type of development. If the property inland of The Strand Beach is used for new residential development, it would not be adequate to just repair the existing revetment. The revetment would have to be rebuilt or replaced with a new shore protection structure. Section 30253 of the Coastal Act requires that new development shall, among other issues, minimize risks to life and property in areas of high geologic, flood, and fire hazard. Habitable land and development often require a higher level of protection than does open space. When considering revetments and seawalls to protect development in danger from erosion, the Commission has routinely used a 100-year wave height and a high tide, or the equivalent of the 1982/83 storms as the design storm wave event. And, revetments or seawalls that are used to protect against erosion should be able to last as long as the development, with routine maintenance, and provide protection from the design storm wave event throughout the life of the development. The full analysis and design of shore protection must consider not only current conditions, but also changes due to an accelerated rise of sea level, changes in sand supply, long-term erosion of the beach and platform, scour, etc. For issues of slope stability, there is also a requirement that the slopes accommodate erosion and provide a 1.5 factor of

safety against geologic failure over the life of the development. (This memo does not cover geologic stability aspects of the site or the option of using setbacks instead of shoreline armoring.)

Given that the revetment is "under-designed" and "under-engineered" in a location that has a very harsh storm climate, the existing revetment is not adequate to protect new development for its economic life, from a design storm wave event. In addition, since some of the design inadequacies are with the base foundation of the existing revetment, the revetment would have to be rebuilt from the base up, to make it adequate to meet current standards. Additional riprap material would have to be added to the structure to meet current design standards, and there would need to be mechanized equipment on the beach. This would not be a short-term effort to repair a few locations, but would be a many-month long, major construction project. Based on all these factors, it would seem that the work necessary to provide adequate shore protection that would allow the inland site to be used for development would constitute new construction, rather than repair of the existing shore protection.

2. Effects on Shoreline Processes

The applicant's representatives, Noble Consultants and Jenkins and Wasyl have provided a variety of reports, analyses and discussions to support the claim that there will be no adverse effects from a reconstructed revetment at The Strand Beach. Noble Consultants and Jenkins and Wasyl note that this portion of the shoreline is in "dynamic equilibrium" and conclude that the existing revetment is not altering it. They do acknowledge that the existing revetment has trapped small amounts of beach quality sediment that otherwise would have been contributed to the littoral system, however, the reports quantify these volumes as being a very small amount of the overall sediment input to this section of shoreline. They provide well researched and presented information on this site, concluding:

> The historical data has (sic.) shown that over this period (the past 20 years) the local beaches have remained stable in the presence of these shorefront protection structures. Consequently there is no scientific justification for the removal of any one of these structures in order to restore beach equilibrium, for such equilibrium exists, maintained in part by the morphology of the wave-cut platform on which these beaches are built. On the other hand the removal of any segment of the existing shorefront structures or the introduction of structural discontinuities (such as the Shoreline Setback Alternative) will set off a chain of littoral responses that are well known to science and will cause damage to property and existing marine habitat. (Jenkins and Wasyl, November 2002, pages 14 – 17.)

The information provided on shoreline conditions is open to several different interpretations and I cannot reach the conclusion that the existing revetment is not altering natural shoreline conditions. The shoreline conditions described in the Environmental Impact Report and other submittals as the No Action Alternative and the Shoreline Setback Alternative are similar to what would exist without some form of shore protection. As noted in the above quotation, removal of the existing revetment could cause property damage and may alter the marine areas, however, these changes would result from returning this section of shoreline to a more natural, unaltered

condition. Erosion, slides and slumps are part of the unaltered condition for this shoreline and options to perpetual current conditions are options that perpetuate an altered shoreline. Thus, it is clear that the existing revetment or a reconstructed revetment alter shoreline conditions. Again, quoting from Jenkins and Wasyl:

> In absence of structural shore protection, the shore fronts slopes in either the pre- or post-project configuration are made up of unconsolidated sedimentary material that is easily eroded by high energy wave events, and by moderate wave events if they occur during spring tides. There is no natural form of shore protection (eg. wide equilibrium sandy beaches, cobble berms, or consolidated formations interior to slope) to prevent or arrest progressive erosion of pre-or post-project shore front slopes if structural shore protection is removed from the site. (Jenkins and Wasyl, November 2002, page 3.)

In its natural condition, prior to construction of the riprap revetments and the harbor, this shoreline may or may not have been in dynamic equilibrium. If the existing shoreline armoring is allowed to fall into further disrepair, this portion of the shoreline might be in a state of rapid change for a number of years until it reestablished a new natural balance between the land stability and the water forces. It would be expected that immediately after failure of a section of the revetment, portions of the slope would retreat quite quickly – especially in locations that are stable now only due to the presence of the revetment. Changes might slow as the effects of the existing revetment lessen and natural conditions become more dominant. These changes to the shoreline may not be desired or acceptable for permanent types of site development. And there is a marine reserve close by that may be affected by the progressive erosion that could occur at this location. However, the progressive erosion and resulting sedimentation and turbidity would be the natural conditions that would exist in this location if there were no shore protection. The continued maintenance and reconstruction of shore protection in this location will maintain the current, modified conditions at this location.

The existing conditions are not the same as natural conditions. Furthermore, the existing conditions involve ongoing, progressive deterioration of the existing revetment. The coastal condition with the existing revetment and with a reconstructed revetment will be different over time. The reports by Noble Consultants and Jenkins and Wasyl show that a new riprap revetment can be constructed in essentially the same footprint as the existing revetment and such construction should be possible to accomplish in the field. Noble Consultants and Jenkins and Wasyl further conclude that since there will be no significant seaward encroachment by a new revetment, there will be no significant changes from the existing coastal condition if the revetment is reconstructed. This is a valid conclusion for the short-term. However, over the long-term, the existing condition is that the revetment will continue to deteriorate. Eventually the natural slides, slumps and erosion will occur as part of the existing condition. A reconstructed revetment would prevent these conditions from developing over the long-term. Over time, the coastal conditions that would exist with a new riprap revetment would differ more and more from what would exist if the existing revetment were allowed to deteriorate. Just because the new revetment would occupy the same footprint, does not mean that the new revetment would have the same performance or result in the same future coastal conditions.

In the evaluation of projects, Commission staff often needs to consider not only the immediate impacts from a possible action, but the longer-term effects. For new development on bluffs and for shoreline protective structures, that is often assumed to be 50 to 75 years, however, as noted by The Headlands Reserve LLC in its November 21, 2002 memo, "While a typical home may only have a useful life for 50 to 75 years (or longer) the *development*, i.e. legal lots, infrastructure, etc. have an indefinite life as long as improvements are maintained." Examination of The Strand Beach with and without the proposed revetment reconstruction should consider the next 50 to 75 years, but this may, in actuality, greatly underestimate the time period over which this section of coast would be altered by the reconstruction of the existing revetment.

The Strand Beach has a small retention capacity. This mini-cell has a small net annual rate of longshore transport -- about 15,000 to 17,000 cubic yards. The Strand Beach contains only a small amount of sand, no more than 60,000 cubic yards (Jenkins and Wasyl, November 2002, page 3) with a thin veneer of sand over a shallow wave-cut platform. In addition, Dana Point has a strong impact on the stability and the shoreward extent of this beach. Both Noble Consultants and Jenkins and Wasyl identify this beach as being in dynamic equilibrium. Robert Wiegel, consulting engineer, reiterates this finding and concurs with it. Some evidence of this "dynamic equilibrium" condition are 1920's photographs of this section of the coast and the similarity between these historic views and photos from March 2000. What these photographs cannot show is the depth of the sand layer and whether the volume of sand in the mini-cell has changed over time. Dana Point controls the seaward extent of the dry beach, so, the width of The Strand Beach could remain relatively stable over time, with a reduction in beach slope and volume of sand making up the beach. Such changes might have occurred, but would not be apparent from photographs.

Even if the volume of sand at The Strand Beach has remained relatively constant from the 1920's to present, this is no guarantee that this condition will continue for the 75 or more years that this beach could have an armored back shore. As stated by Robert Wiegel in his review of the submitted material, "Many uncertainties are involved in trying to predict the future, such as decadal changes in wave climate, based on a relatively short length of time of observations; trying to know these quantitatively." (Wiegel, March 2003, page 3) In part, because of this uncertainty, Robert Wiegel concludes that a structure should be used along the boundary between the beach and the upland to insure long-term protection of the upland development. (This conclusion was provided within the context that the site will be used for permanent development and that these forms of shore protection are the most effective engineering options of the 6 proposed alternatives.) It would be equally appropriate to conclude that since "(m)any uncertainties are involved in trying to predict the future" that it is difficult to predict whether or not shore protection will alter shore processes in the future. Such changes could reduce shoreline sand supply and most likely reduce access and recreational opportunities.

Shoreline change is far more common both geographically and temporally than shoreline stasis. Acceleration in the rise in sea level or higher high water would inundate larger amounts of the narrow wave-cut platform. Without increased sediment inputs, the width of dry beach would be reduced in the future. This will be worsened slightly by the cumulative reduction in sediment (averaging 1,800 cubic yards annually) due to the armoring throughout this mini-cell.

During the times that the revetment is exposed to wave attack (i.e. when it is really needed to protect the backshore), the revetment will interact with waves and alter wave energy dissipation and reflection from what it would be if the revetment were not in place. When the revetment is exposed to wave attack there will be changes in the mobilization of beach sand, a reduction in beach access and impairment of recreational opportunities from what exists when the revetment is not exposed to wave attack. Noble Consultants (May 2002) have estimated that the new revetment will be exposed to wave attack, on average, 21.94 days per year if the sand level stays at +8.0 feet, MLLW. If the sand level fronting the revetment drops by one foot, the potential annual exposure would increase to 48 days. With a two-foot drop in sand level, the potential annual exposure would increase to almost 60 days. The drop in sand level could occur from a continued reduction in the amount of sand getting to the beach. An apparent drop in sand would occur if there were a rise in sea level. Either condition would increase the amount of time that the revetment is altering coastal processes.

Surfrider Foundation has submitted photographs of the beach taken on 9 November 2002 when there was a 5.5-foot high tide. It is clear that during times that the revetment is being impacted by waves, the beach is inundated and impassible. (Attachment to 26 December 2002 letter from Michael Lewis) These impacts will increase in frequency and significance if the sand levels drop and the revetment is exposed more regularly to wave attack. The impacts will also increase in frequency and significance if there is a rise in sea level or high and higher high water.

The existing revetment does alter coastal processes, local sand supply, beach access and opportunities for coastal recreation when there are wave structure interactions. These will continue in the future with either the existing revetment or a proposed new structure. These impacts will worsen if there is a drop in sand level or an increase in water level.

3. Future Options for Shore Protection

Material for the LCP Amendment provides an analysis of various shore protection options. The analysis concludes that a rebuilt revetment would only require 6 feet of encroachment seaward of the earthen slope, it would have only a small impact on scour, and would minimize end effects at the junctions with adjacent structures. The discussion quotes a staff report for a revetment in Pacifica that the revetment would dissipate approximately 40 to 50% of the incoming wave energy. This estimate for energy dissipation was provided in the City of Pacifica's submitted material without independent examination. The estimate for energy dissipation was not supported by any research or supporting data; and there is no basis for expecting this quantification to be appropriate for the proposed revetment.

Robert Wiegel notes in his third party review, "I have concluded that either a rock revetment or a reinforced concrete seawall would be an appropriate alternative….. One of the conclusions I reached earlier, …. is that the often made statement that stone revetments have less effect on beaches than seawalls may not be supported by evidence from field observations. It may, or may not, be correct." (Wiegel, March 2003, page 17)

A seawall for this site would be approximately 30 feet high. This could position a seawall at about the +30' slope location. The revetment would be lower and would be located at about the

+20' slope location. This could position a seawall further landward than the revetment, recognizing that some accommodation will be needed for transitions zones at the intersections with revetments to the north and south. Within a 2,100-foot long section of shoreline, these end zone accommodations could be provided and also have a substantial section of the armoring located further landward. Furthermore, the current recommendation by the applicant to maintain the southern-most section of the existing revetment is based on the information that this section of revetment is buried and that the proposed development locations would not need this section of revetment for direct stability, but rather to provide an acceptable terminus or end point that abuts the northern portion of Dana Point. In reality the shoreline protection for The Strand Beach includes this 140-foot section of revetment. To the extent that it can be incorporated without change, into an acceptable long-term plan for The Strand Beach, it should be considered for incorporation. However this section of revetment should not be used to support or promote any alternatives for shoreline protection for the rest of The Strand Beach. Specifically, this section of revetment should not be used to reject a vertical wall option for the rest of the property, or a more landward location for a reconstructed revetment. The revetment to the north is a separate property and project, and will have to be considered as an existing design constraint for future Strand projects.

The LCP Amendment should consider both structures as viable options if this site is found to be able to accommodate some future permanent development project. The options of protection by beach nourishment or a detached breakwater have been adequately considered in the submitted material and shown to be infeasible or to have significant environmental impacts. If the site is used for development that requires new shore protection, the viable options that should be analyzed further would be a new revetment that uses as much of the existing riprap as possible, or a new seawall, that uses some of the existing riprap for scour protection and transitions with the adjacent revetment structures.

4. Potential Generation of Large Sediment Plumes with No Shore Protection

If there is no shore protection at The Strand Beach, the backshore will erode more quickly than it is eroding currently. If there is a large storm with large enough waves to attack the backshore for a long period of time, there could be a large amount of sediment and turbidity. The estimates provided by Jenkins and Wasyl are for an extreme event. It is possible that an extreme event will occur, but it is more likely that there will be many smaller events.

5. Consistency with Industry Practice

The provided studies have been professionally prepared. The reports are consistent with industry practice. They have provided sufficient information on the project site and existing processes for staff to examine the site conditions and to draw independent conclusions. Overall, the conclusions provided in this memo are not inconsistent with the conclusions drawn in the submitted reports. While the conclusions differ from those reached in the provided studies, they are a difference in interpretation or perspective, and not a disagreement in the fundamental research or supporting work that was provided for this project.

There are several supporting points with which I cannot now agree (a) that the wave energy at Dana Point is 10 times that at Santa Barbara, Santa Monica, Redondo Beach and Huntington Beach; (b) that revetments will dissipate 40 to 50% of the incoming wave energy; and, (c) that the beach is in dynamic equilibrium. My concerns with these supporting points are listed below. It is unlikely that the applicant can undertake the detailed, long-term research that would be necessary to remove the major uncertainty that surrounds these three issues. These uncertainties are not unique to this site or this LCP Amendment; the Commission has made well-reasoned decisions in the past with similar uncertainty. These uncertainties are discussed here so that they are recognized and to prevent some future applicant from assuming that the Commission staff has accepted these supporting points as being completely correct.

As discussed previously, the concern for wave energy is not in the general characterization that there is a harsh wave climate at Dana Point. The concern for wave energy is in the overall quantified comparison of wave energies without further qualification as to the types of waves, time period, or other site conditions.

The quantification of energy dissipation by the Pacifica riprap revetment was not examined as thoroughly as it might have been during project review. While some staff did disagree at the time with this characterization of energy dissipation by a revetment, it was not critical to the overall examination of the project. This quantification was not well documented in the application by the City of Pacifica, and in hindsight, staff should either have requested the field studies and laboratory research that was the basis for this quantification, or requested that the City formally withdraw that information. Staff did neither, and actually repeated this unsupported quantification in the findings. However, there is no justification for using this estimate of energy dissipation for any other project or project location. And, assuming the wave energy at Dana Point is actually more than 10 times higher than many other locations in southern California, this quantification should be based on field research and laboratory conditions typical of this high energy region.

There is field evidence from Monterey Bay that regardless of variations in dissipative capacity, beaches fronting both riprap revetments and vertical seawalls, in a sand-rich littoral cell, will respond very similarly. “Repeated surveys and comparisons at both an impermeable vertical seawall and a sloping revetment indicate little consistent difference in profile responses due to differences inpermeability (sic.). Either the apparent differences in permeability of the two structure are not significant to wave reflection, or the importance of reflected wave energy to beach scour needs reconsideration.” Griggs, Tait and Corona, 1994, page27 and 28) Research to quantify energy dissipation should examine various types of structures and also should provide detailed information on the zone or width of beach that would benefit from the variation in energy dissipation that would result from different structure configurations.

This beach has been found to be in dynamic equilibrium since it is similar to the beach shown in several 1920’s photographs. Historic photographs are extremely useful for qualifying shoreline trends, but due to all the distortions that occur in unrectified photographs, they are not useful for quantitative analysis. Especially lacking is any indication of absolute beach elevation. The mere existence of a beach at this location since the 1920’s is most certainly something to appreciate. The issue now is with the continued existence of The Strand Beach. There may be small changes

in this beach system from the 1920's to present that will become more apparent in the future. It would not be prudent to assume that there will be no changes to The Strand Beach in the future if the proposed revetment reconstruction occurs, or that the existing revetment is critical to sustaining the beach, as it exists today. It is most likely that The Strand Beach will be affected by wave impacts, erosion, sea level rise and other future conditions.

Conclusions

Overall, I believe the applicant has presented a well-researched and well-developed plan for development of a very hazardous site. This plan relies heavily upon engineering to reduce the risks at this site to a level that the professional community considers to be acceptable. The new or reconstructed revetment is a critical element in the overall plan for stabilizing the area inland of The Strand Beach. The use of any type of shore protection at this beach will change coastal processes from what would exist if the beach and backshore were returned to natural conditions. While other shore protection options could be used at this site, specifically a vertical wall, it is my professional judgment that this site cannot be used for the proposed development without some form of shore protection.

CALIFORNIA COASTAL COMMISSION
45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105- 2219
VOICE AND TDD (415) 904- 5200
FAX (415) 904- 5400

8 July 2003

GEOTECHNICAL REVIEW MEMORANDUM

To: Karl Schwing, Orange County Permit Supervisor
From: Mark Johnsson, Staff Geologist
Re: DPT LCPA 2-02 (Dana Point Headlands LCP Amendment)

In regard to the above referenced LCP amendment, I have reviewed the following documents:

1) Converse Consultants 1998, "Review comments on More and Taber Report 'Stability Investigation Dana Strand Club, vesting tentative tract No. 13421, Dana Point, California, vol. 1 and 2, dated March 4, 1988 (Job No. 387-584); prepared for M.H. Sherman Company, Chandiss Securities Company, Sherman Foundation'", 3 p. review letter dated 12 February 1998 and signed by D. S. Magorien (CEG 1290).

2) AGRA Earth and Environmental, Inc., 1999, "Geotechnical evaluation, feasibility of landslide remediation, Dana Strand club area, Dana Point Headlands project, Dana Point, California", 49 p. geotechnical report dated 15 October 1999 and signed by G. Lambeth, S. T. Kerwin (CEG 1267) and B. D. Constant (GE 2278).

3) Zeiser Klein Consultants, Inc., 1999, "Third Party Review, AGRA Earth and Environmental, Inc. "Geotechnical evaluation, feasibility of landslide remediation, Dana Strand club area, Dana Point Headlands project, Dana Point, California" Their Job No. 9-212-306100, dated October 15, 1999", 6 p. review letter dated 17 November 1999 and signed by F. L. Zeiser (CEG 1131).

4) AGRA Earth and Environmental, Inc., 2000, "Geotechnical review response, feasibility of landslide remediation, Dana Strand club area, Dana Point Headlands project, Dana Point, California", 24 p. geotechnical report dated 4 February 2000 and signed by G. Lambeth, S. T. Kerwin (CEG 1267) and B. D. Constant (GE 2278).

5) AGRA Earth and Environmental, Inc., 2000, "Bluff setback evaluation, Harbor Point Area of Lower Headland, Dana Point Headlands project, Dana Point, California", 20 p. geotechnical report dated 21 February 2000 and signed by G. Lambeth, S. T. Kerwin (CEG 1267) and B. D. Constant (GE 2278).

6) AGRA Earth and Environmental, Inc., 2000, "Addendum geotechnical evaluation, feasibility of landslide remediation, Dana Strand Club Area, Dana Point Headlands project, Dana Point, California", 14 p. geotechnical report dated 21 March 2000 and signed by G. Lambeth, S. T. Kerwin (CEG 1267) and B. D. Constant (GE 2278).

7) Headlands Reserve LLC, 2001, "The Headlands Development Conservation Plan", General Plan Amendment, Planned Development District, Local Coastal Plan and Policies, and Local Coastal Implementing Actions Program dated 24 July 2001.

8) LSA Associates 2002, "Final Environmental Impact Report: Headlands Development and Conservation Plan, Dana Point, California", 3 volume Environmental Impact Report dated February 2002.

9) AMEC Earth and Environmental, Inc. 2002, "Headlands Development and Conservation Plan: Geotechnical Evaluation of Shorefront Design Alternatives (Planning Areas 1, 2 and 3), Dana Point, California", 34 p. geotechnical report dated May 2002 and signed by D. Dahncke (GE 2279) and S. T. Kerwin (CEG 1267).

10) Noble Consultants, Inc. 2002, "Headlands Development and Conservation Plan: Supplemental Assessment for Shorefront Protection Alternatives, Dana Point, California", 42 p. report dated May 2002 and signed by I. Noble Consultants.

11) Dr. Scott Jenkins Consulting, 2002, "Evaluation of coastal processes effects associated with removal of the revetment from the Headlands Development and Conservation Plan", 72 p. report dated 2 May 2002 and signed by S. A. Jenkins and J. Wasyl.

12) MBC Applied Environmental Sciences 2002, "Analysis of impacts to the Niguel and Dana Point Marine Life Refuges Resulting from Alternatives to the Strand Beach Revetment Reconstruction", 15 p. report dated June 2002 and signed by W. K. Darnell, M. D. Curtis, M. D. Curtis, A. K. Morris, K. L. Mitchell, M. R. Pavlick and D. G. Vilas.

13) AMEC Earth and Environmental, Inc. 2002, "Headlands Development and Conservation Plan: Geotechnical Evaluation of Conceptual Shorefront Setback Alternative (Planning Areas 1, 2 and 3), Dana Point, California", 10 p. geotechnical report dated November 2002 and signed by D. Dahncke (GE 2279) and S. T. Kerwin (CEG 1267).

14) Dr. Scott Jenkins Consulting, 2002, "Constraints and Unique Characteristics Effecting Non-Structural Shore Protection Alternatives for the Dana Point Headlands Development and Conservation Plan", 17 p. report dated 17 November 2002 and signed by S. A. Jenkins and J. Wasyl.

15) AMEC Earth and Environmental, Inc. 2002, "Response to Geotechnical Review Memorandum, Headlands Development and Conservation Plan (HDCP), Dana Point, California", 3 p. letter report dated 20 November 2002 and signed by S. T. Kerwin (CEG 1267).

16) Noble Consultants, Inc. 2002, "Headlands Development and Conservation Plan: No revetment, shorefront slope setback alternative, Dana Point, California", 5 p. report dated 20 November 2002 and signed by I. Noble Consultants.

17) The Keith Companies, Inc. “Headlands Development and Conservation Plan: No revetment, Shorefront Slope Setback Alternative,” 2 p. report dated November 20, 2002 and signed by Paul S. Carey, P.E.,

18) AMEC Earth and Environmental, Inc. 2002, "Geologic/Geotechnical Constraints and Remedial Grading of the Strand Area, Headlands Development and Conservation Plan (HDCP), Dana Point, California", 2 p. letter report dated 23 December 2002 and signed by S. T. Kerwin (CEG 1267).

19) Robert L. Wiegel, Consulting Engineer, “Peer Review of Reports on Coastal Engineering Aspects of the Headlands Development and Conservation Plan, Dana Point, Orange County, California,” 20 March, 2003.

In reviewing this LCP amendment, I have made use of the City of Dana Point General Plan dated 9 July 1991, The City of Dana Point Zoning Code dated 27 March 2001, and have reviewed the policies in the Local Coastal Program Amendment (LCPA 01-02) dated 30 May 2002. I have attended numerous meetings and conferences with representatives of the City, the developers,

and their technical consultants, most notably Scott Kerwin, Certified Engineering Geologist with AMEC Earth and Environmental, Dr. Scott Jenkins of Scripps Institute of Oceanography, Paul S. Carey, Registered Civil Engineer with The Keith Companies, and Ron Noble, Registered Civil Engineer and principal of Noble Consultants. I also have reviewed numerous comment letters touching on geotechnical matters submitted by the developers and by their legal counsel, Mr. Joseph Petrillo of Sheppard Mullin Richter and Hampton, LLP. I have had numerous discussions and have reviewed comment letters by groups who have expressed concerns regarding the amendment, including the Surfrider Foundation, the Sierra Club, the California Native Plant Society, and the Dana Point Headlands Action Group. In addition, I have visited the site on several occasions in 2002.

I prepared one previous geotechnical review memorandum, dated 16 September 2002, which addressed whether a portion of the proposed development (the Strand) could be undertaken so as to 1) assure stability of the development, 2) not require the construction of shoreline protective devices, and 3) not create or contribute significantly to erosion, instability, or destruction of the site and the surrounding area, as required by section 30253 of the Coastal Act. The Commission's staff engineer prepared a memo, dated 12 August 2002, that addressed similar issues, and also requested answers to a number of engineering questions. The developer responded to Ms. Ewing's memo in a letter dated 21 November 2002, and I understand that she is addressing the adequacy of this response in a separate memo. The developers, their legal council, and their technical consultants have provided several responses to the concern that the proposed development at the Strand is not consistent with Section 30253. These are addressed in detail below, under the heading "Geologic Stability and Coastal Erosion at the Strand."

This is a project-driven LCP amendment. The proposed changes to the LCP are to make possible a particular proposed project, as outlined in reference (7). Accordingly, this review, like most of the documents cited above, will be focused on the project itself, rather than on specific policies of the LCP.

As you are aware, the Dana Point Headlands Development and Conservation Plan calls for an open space preserve for much of the headlands itself; a resort hotel, parking lot and public park on the headlands near the intersection of Cove Road and Street of the Green Lantern; approximately 50 lots for private custom homes in a depression ("the Bowl") area inland of the headlands, and now containing a greenhouse and nursery; and approximately 75 lots for private custom homes on a sloping site consisting of an ancient landslide complex above Strand Beach and previously occupied by a trailer park. Various additional public park areas and access trails also are part of the proposed project. Approximately 2.2 million cubic yards of grading is proposed. The majority of the grading takes the form of the removal of about one million cubic yards of material from the upper portion of the landslide complex above the Strand, the removal and recompaction of 33,000 cubic yards of material in the lower portion of this landslide complex, and the addition of approximately one million cubic yards of fill to the Bowl area. Together, this grading accomplishes two main purposes: it balances the landslide forces to yield acceptable factors of safety against sliding for the Strand, allowing development there, and it elevates building pads in the Bowl to provide better coastal views. To protect the development of the Strand area, and as part of the stabilization plan for the ancient landslide complex, the applicant proposes to rebuild and enlarge an existing ~2,200 foot long revetment that extends nearly the length of

Strand Beach, and is contiguous with several thousand feet of revetment protecting development to the north of the subject site.

A number of geotechnical concerns are raised by the proposed LCP amendment. The project area can be conveniently subdivided into the Headlands area and the Strand area. In the Headlands, the stability and the appropriate setback from the bluff edge are of greatest concern. In the Strand, the stability of the ancient landslide complex and the means by which the site can be made suitable for development is of concern. In particular, the applicant has provided evidence that any development of the site requires a shoreline protective device to prevent erosion of the toe of the reconstructed slope at the base of the landslide complex. In this memo, I will address the following geologic, geomorphic, and geotechnical issues: 1) Geomorphology of the site; 2) Geologic stability and coastal erosion at the Headlands; 3) Geologic stability and coastal erosion at the Strand; and 4) Other geotechnical constraints at the site.

Site Geology and Geomorphology

Dana Point Headlands owes its prominence in large part to the resistance nature of the rock underlying the Headlands portion of the site. This rock, the San Onofre Breccia, is a resistant conglomerate unit that also forms headlands along the coast to the north. Although generally very resistant to erosion (reference 5 quotes a long-term average bluff retreat rate of less than 10 feet in 70 years, or approximately 1.7 inches/yr) and relatively stable, landslides do occur, such as the recurring landslides in Three Arch Bay and a 1980 landslide on Cove Road, on the south end of the Headlands (see discussion below). In contact with the San Onofre Breccia is the Monterey Shale, which forms the slopes in the Strand area, and underlies portions of the Bowl and properties offsite to the south and east. Throughout California, the Monterey Shale is susceptible to landsliding. Despite a relatively favorable bedding orientation, the coastal bluff in the Strand area is characterized by a complex of ancient landslides, none of which have shown any recorded historic movement. Both the San Onofre Breccia and the Monterey Shale are overlain in the subject area by a relatively thin marine terrace deposit.

The headland at Dana Point is one of the most striking geomorphic features of southern California, characterized by nearly vertical sea cliffs almost 200 feet high. These bluffs terminate rather abruptly at a wave-cut marine terrace, and the delineation of the bluff edge around the Headlands is relatively straight-forward. The existing LCP contains a figure (exhibit 6) where a "blufftop line" is identified for a part of the Headlands. This line appears to be roughly consistent with the Coastal Act definition of bluff edge, as contained in California Code of Regulations, Title 14, § 13577 (h) (2).

At the northern end of the figure, beyond the existing residential enclave, the "blufftop line" appears to be inconsistent with the Coastal Act definition, however. The line as shown on exhibit 6 crosses contours at a high angle, then follows the seaward edge of a step-like feature, and terminates against the northern boundary of the LCP area near the middle of the nose of a ridge descending to the sea. In keeping with the definition in the regulation cited above, the bluff edge would be defined under the Coastal Act to lie at "the landward edge of the topmost riser." To the north of the area shown in exhibit 6, in the uncertified area above the Strand, the bluff edge line

would be drawn at the demarcation between the relatively flat bluff top and the much steeper bluff face.

The developers have questioned several aspects of this interpretation. First, they question whether the slope above the Strand should be considered a coastal bluff. They argue that the slope, which has an overall gradient of approximately 22%, is not steep enough to be considered a bluff. Further, they argue that previous grading on this slope has resulted in its alteration to the extent that it can no longer be considered a natural landform. Accordingly, they do not consider the proposed development at the Strand area to lie on a bluff face, and have declined to draw a bluff edge line.

Unfortunately, the term "bluff" is not defined under the Coastal Act. It is, however, defined in the "Glossary of Geology," published by the American Geologic Institute (R.L. Bates and J.A. Jackson, eds., 2nd ed., 1980) as

> a) a high bank or bold headland with a broad, precipitous, sometimes rounded cliff face overlooking a plain or a body of water; especially on the outside edge of a stream meander; a *river bluff*. b) Any cliff with a steep broad face.

This definition, qualitative as it is, is of limited usefulness in evaluating the bluff edge in this case. In defining the bluff edge as described above, I am guided by the relative continuity of the upland flat area above the undisputed bluff at the Headlands and that above the Strand. Although it is certainly true that the slope below this upland is much less steep at the Strand than at the Headlands, the geomorphic features—bluff top and bluff face—are continuous. The reason for the significant difference in slope is explained by the underlying geology and geologic processes that have been operating on the coastal bluff. The San Onofre Breccia is much stronger, and accordingly capable of standing at steeper slopes, than is the Monterey Formation. Further, at the Strand, the bluff must have been steeper at some point in the past, to provide a driving force for the creation of the large landslide complex that exists there today. The scalloped plan view of the bluff edge, the gentle slope of the bluff and to some extent the hummocky, irregular, slope of the Strand area itself, are the results of these slope movements in the past.

The developers also question whether the slope above the Strand can be referred to as a natural landform due to the fact that it has been previously graded. According to the developers, in the mid 1920's a road was graded down the slope and a parking lot was graded at the southern end of the Strand. More extensive grading occurred in the mid 1950's, when a mobile home park was constructed at the site, resulting in the construction of building pads, additional roads, and low retaining walls. This was followed by the construction of a detention basin in 1962, and the expansion of the mobile home site, including the creation of an additional road, tennis courts, and additional parking, in 1968. Although the geologic cross sections provided in the referenced documents show that cuts and fill slopes generally were on the order of less than 5-10 feet, grading did, indeed, cover much of the northern portion of the Strand. The southernmost part of the Strand was not graded extensively, as is apparent from aerial photographs. Although grading created a stepped surface topography that allowed the construction of roads, mobile home pads, and parking areas, the overall form of the slope was little altered. Today, a geologist standing on the Headlands and looking north will recognize a classic example of a landslide complex. The

Commission generally has recognized that natural landforms may be altered by grading—both cut and fill—but that they do not cease to be "natural landforms" because of such alteration. In my opinion, the Strand represents a natural landform that has been altered, but fundamentally remains a natural landform nonetheless. The slope above the Strand existed prior to the grading, and it exists now in much the same place and shape as before the grading. It does not represent a man-made landform such as a fill slope, a landfill, a freeway ramp, or a causeway.

Geologic stability and coastal erosion at the Headlands

Long-term coastal erosion rates for the Headlands have been estimated in reference (5). This reference also quotes from a 1993 USACE study indicating that bluff retreat rates for this portion of the coast range from 0.11 to 0.19 feet per year. For the current project, bluff retreat rates are estimated by overlaying a topographic map constructed from 1929 aerial photographs with a topographic map in 1998 produced for this project. This careful work should yield an accurate estimation of the historic long-term erosion. The investigation found that erosion in the Harbor Point Area over the period 1929-1998 (69 years) was very low, and "generally within the estimated prevision of the topographic contours and appears to have been less than about 10 feet during the previous 70 years." Based on this, the expected bluff retreat in this area, over the 75 year useful economic life of the development, is less than 11 feet. Reference 5 also provides slope stability analyses at several locations around the Headlands. These analyses, undertaken with well-documented shear strength data appropriate to the San Onofre Breccia, demonstrate minimum global factors of safety of 1.23 to 1.36 for various conditions and locations around the Harbor Point Area. The bluff-edge setback necessary to meet a 1.5 factor of safety (static) for these bluffs is 38-39 feet. Using the Commission's usual criteria that the minimum factor of safety of 1.5 (static) should be maintained for the expected economic life of the development, given ongoing gradual bluff retreat, the long-term average bluff retreat setback and the setback necessary to meet a 1.5 factor of safety are additive. In this case, a 49-50 foot setback from the bluff edge would result. This is nearly identical to the 50 foot building setback recommended in reference (5). Note that the setback of 25 feet in the existing LCP is not adequate to assure geologic stability assuming a 75 year design life. However, the structures proposed under the Headlands Development and Conservation Plan are set back greater distances than required in the existing LCP. I recommend that a minimum bluff-edge setback of 50 feet be required for any structures in the Headlands area, which is consistent with the recommendation in reference (5).

As acknowledged in references (5) and (8), landslides have occurred at the extreme southern and northern ends of the Headlands area. Near the southern end of the northern residential enclave, an inactive fault separating the San Onofre Breccia and the Monterey Formation appears to have influenced the failure, which was active in the early 1980's. The failure was reactivated during the 1997-1998 El Niño. This landslide currently is restricted to the bluff face, and involves rocks of the Monterey and San Onofre Breccia formations, as well as the marine terrace deposits. It does not extend to the top of the bluff, and the current slide plane does not threaten the structures at the bluff top. At the southern end of the Headlands, at Cove Road southeast of the LCPA area, a landslide in 1980 threatened a restaurant, the road, and other development. Like the landslide to the north, this feature was developed along an inactive fault separating the Monterey Formation and the San Onofre Breccia. It was remediated by grading and the installation of rock anchors, and appears to pose no further danger to the area of the LCP amendment.

Although slope stability is of limited concern in the Headlands area, at least as compared to the Strand area, the relatively low global factors of safety for the Headlands bluffs, the presence of the two moderately large, active, landslides at the northern and southern end of the site, and on-going surficial slumping all indicate that caution is in order. Accordingly, development should be set back at least 50 feet from the bluff edge as recommended above. In addition, it would be prudent to limit the infiltration of ground water throughout the site, but especially close to the bluff edge and in the vicinity of the mapped inactive faults separating the Monterey Formation and the San Onofre Breccia. In these areas, especially, the use of infiltration as a water quality BMP is not appropriate. Further, irrigation should be kept to a minimum to limit the increase in ground water levels that commonly accompany residential development in southern California.

Geologic stability and coastal erosion at the Strand

As described above, the area known as "The Strand," most of which lies in a currently uncertified ("whiteholed") area of the existing LCP, is characterized by an ancient landslide complex developed in the Monterey Formation and involving the overlying terrace deposits. This complex, which covers about 70% of the Strand, mostly at its northern end, consists of four major, deep-seated landslides that are partly superimposed and overlapping. In addition, a number of smaller slides and surficial slumps are superimposed on the larger slides. These landslides and their stability were investigated extensively during the development of the Dana Point Conservation and Development Plan, as reported on in references (2), (3), (4), and (6). Although there is no evidence of historic movement on any of the ancient slide planes, the overall global factor of safety against sliding (static) for this complex ranges from 0.83 to 1.67 (reference 2). Notwithstanding the fact that a mobile home park previously occupied this area, the site is not suitable for the construction of fixed, permanent structures for human habitation without remedial work to stabilize these landslides.

The landslides that characterize this site are a natural consequence of coastal erosion in these rocks. Episodic failure and continued movement is a natural consequence of marine erosion at the base of a weak coastal bluff, such as must have existed at the site prior to the initiation of slope failures. Following the initiation of landsliding, periods of movement would naturally occur as material at the toe of the slides is removed by wave action, removing the "buttressing effect" of this material. What would follow is a period of relative stability, which would last until continued marine erosion destabilized the mass sufficiently to initiate movement once more. Presumably, this type of alternating episodic movement and relative stasis occurred from the time the bluff initially failed (estimated by the applicant's consultants to be at least 10,000 years ago) until the construction of the revetment in the late 1950's. The revetment slowed or eliminated marine erosion of the toe of the landslide, and slope movements since that time have been limited to surficial slumps.

Development on this landslide complex with permanent structures for human habitation requires that the stability of the site be improved, as required by City and County grading codes, and section 30253 of the Coastal Act. Stabilization of the site could presumably be achieved through several means, but the approach proposed by the developers is mass grading to balance the landslide forces and a revetment to protect the toe of the proposed manufactured slope from marine

erosion, ensuring that the forces balanced by the grading operation remain balanced. The geotechnical evaluation of the grading plan is provided in reference (2), which demonstrates that the proposed manufactured slopes would have the required factor of safety of 1.5 (static) and 1.1 (pseudostatic). Further, the stability of the temporary construction slopes that would be created during this grading operation were evaluated and found to meet industry standards-of-practice. This grading plan was subject to third party peer review (reference 3). The third-party review requested that additional analyses be performed testing for failure along non-circular failure surfaces, further justification of the rock strength parameters used in the analyses, and that further analysis of the temporary construction slopes be undertaken. These comments were responded to in references (4) and (6); and it is my opinion that the concerns of the third-party reviewers were adequately addressed. The proposed grading plan results in slopes that meet standards-of-practice stability guidelines for all reasonable failure modes, and can be constructed with slopes that are at or near that factor-of-safety of 1.2 that is standard-of-practice for temporary construction slopes.

The analysis above demonstrates that the proposed slopes will stabilize the Strand area and can be constructed safely. They do not demonstrate the stability of the site given ongoing marine erosion at the toe of the manufactured slopes. Just as for the ancient landslide complex, marine erosion of the proposed manufactured slope would lead to decreased slope stability over time. Accordingly, the design requires that marine erosion at the base of the manufactured slope be prevented. Given the environment at the site and the fact that sea level is currently rising, preventing the erosion of the toe of the manufactured slope requires that a shoreline protective device protect the site from marine erosion. The developer proposes that the existing revetment, which currently is in a state of disrepair, be rebuilt and enlarged to accomplish this task.

Citing apparent inconsistencies between this plan and section 30253 of the Coastal Act, which requires that new development not "in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs," staff asked the developer to consider whether development could occur in the Strand area without reliance on a revetment, or with reliance only on the existing revetment in its current condition. References 9 through14 present the developers' response to this question, assuming an alternative that contained a soft "sacrificial" artificial slope fronting the development, and setting the development back sufficiently to assure its stability for its assumed design life of 75 years. My review of references 9, 10, and 11 is contained in my review memorandum dated 16 September 2002. To summarize, these documents predict that the removal of the revetment would cause 29 to 87 feet of bluff retreat over the next 75 years, that this would result in the destabilization of the site such that by the end of the 75 year design life slope stability would be severely compromised, and that public safety, water quality, and existing and proposed development would be impacted. These impacts are similar to those expected of a naturally eroding shoreline. It could be concluded from these reports that the "sacrificial" artificial slope would protect the development for the required 75 years, but that at the end of that time the first line of development would be compromised. However, the impacts identified by these references are not consistent with good engineering practice, and could be construed as construction with the intent of "benign neglect." In meetings with staff, the City has indicated that they would not issue a building permit that assumed the continued erosion of the new development.

Reference 12 contains an evaluation of the impacts of the continued erosion of the Strand area on water quality, with special reference to the Niguel and Dana Point Marine Life Refuges. Following the catastrophic landslide hypothesized in reference (11) as a possible "end-member" result of revetment removal, this reference predicts that high turbidity would result from the erosion of the Strand area, and that this turbidity would have a negative impact on the kelp beds in these reserves. Although turbidity associated with the erosion of landslides such as these certainly is likely, the event hypothesized in reference (11) is an end-member event; more likely is the gradual failure of the Strand area though repeated, smaller landslide events. Although the impact such turbidity might have on marine life is beyond the scope of this geotechnical review, I note that aerial photographs taken in 1952 (Continental Aerial, date 12.12.1952, images 3K49 and 3K50), before the revetment was constructed at the site, shows thriving kelp beds immediately offshore. Apparently, the erosion of the landslide complex that must have been occurring prior to the construction of the revetment did not interfere with the growth of healthy kelp beds.

In response to the conclusions put forth in references 9-12, staff noted that an underlying assumption behind the analyses in these references is that substantially the same grading plan as initially proposed would be adopted, except that the most seaward portion would be considered "sacrificial." In May of 2002, staff asked the developer if a new grading plan could place development in a site where it would not require a shoreline protective device, but would still assure stability for the design life of the development. References 13 through 18 represent the developers' response. To summarize the geotechnical aspects, contained largely in references 13 and 18, it appears that final manufactured slopes that meet minimum slope stability guidelines and result in a setback consistent with 75 years of marine erosion could be envisioned and modeled. However, the construction of these slopes would not be possible given current technology and OSHA requirements. The temporary construction slopes would be very steep and extend to well below sea level, resulting in very low factors of safety. These temporary excavations could not be undertaken without extensive shoring and continual pumping, and have been deemed infeasible by the developers and their consultants. I concur in this assessment, but note that to date only two grading plans have been rigorously evaluated—the original proposal as outlined in references (7) and (8), and that proposed in reference (13). Although I remain unconvinced that it is impossible to produce a grading plan that both balances landslide forces and maintains an appropriate setback such that no revetment is necessary, the Commission's staff does not have the resources to design such a grading plan. Accordingly, the documents submitted by the developer would seem to indicate that the Strand area cannot be developed to the extent envisioned by the LCPA without the construction of a shoreline protective device. Such construction would appear to be inconsistent with section 30253 of the Coastal Act.

Alternative development that might be possible at the site without extensive grading or additional shoreline protection has not been considered by the developers. Such development might include facilities for recreation, such as a campground or hiking trails. Even residential development might be possible on limited parts of the site, such as the area formerly occupied by tennis courts, landward of the bluff edge, near the center of the site.

Due to the instability of the Strand area, it is especially important to limit the build up of ground water in either the natural landslide deposits or in any fill slopes constructed at the site. Fill slopes should have adequate drain systems, and the infiltration of ground water should be kept to

a minimum. In the Strand area, the use of infiltration as a water quality BMP is not appropriate. Further, irrigation should be kept to a minimum to limit the increase in ground water levels that commonly accompany residential development in southern California.

Other geotechnical constraints at the site.

The EIR (Reference 8) and the geotechnical reports on which it is based contain a number of recommendations that pertain to other geotechnical constraints at the site. These include susceptibility to ground shaking during seismic events, corrosive soils, expansive soils, and differential settlement. These issues do not represent unusual or especially difficult constraints on the development. Nevertheless, these constraints should be considered when designing development for this area, and I concur with the recommendations contained in these reports. Any permit issued after adoption of this LCPA should require adherence to these recommendations. Alternatively, policies based on these recommendations could be incorporated into the current LCPA.

Finally, if a shoreline protective device is required to protect existing development or public beaches within the area of the LCPA, consistency with Section 30235 of the Coastal Act requires that impacts to the sand supply be mitigated. Although references 11 and 14 indicate that the material at the Strand contributes very little to the sand budget of the littoral cell, any contribution that is lost through the reduction of coastal erosion envisioned as part of development of the Strand must be mitigated by, for example, contribution to an ongoing beach nourishment program should one be developed within the littoral cell.

In closing: I turn to two questions that you asked in your 21 May memo to Lesley Ewing, Staff Engineer, and myself:

> Do you agree or disagree with the landowner's consultants' conclusion that the development grading plan contemplated in the LCPA is the only feasible grading plan that achieves a satisfactory factor of safety and would be feasible to construct?
>
> Given the existing geologic and shoreline conditions, would a lesser intensity of development (i.e. lesser residential units and/or different land use) still necessitate the scale of geologic remediation and shoreline protection contemplated in the LCPA?

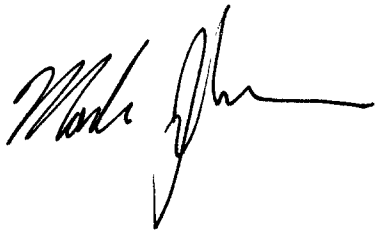
As outlined above, I remain unconvinced that the answer to the first question is "yes," but lack the resources to develop a grading plan that does meet the requirements stipulated. I feel that it may be possible to construct a much smaller buildable area that is set back sufficiently to assure stability for the 75 year assumed design life of new development. I cannot, however, demonstrate that this is the case. I do concur with the City and the developers' consultants, however, that such construction, which assumes the continual degradation of constructed slopes, is contrary to normal engineering practice.

As to the second question, I think that it is clearly possible to undertake a lesser intensity of development without the grading or shoreline protection proposed in the LCPA. Examples include

very limited bluff top residential development, habitat, hiking trails, campgrounds, and similar recreational opportunities.

I hope that this review is helpful. Please do not hesitate to contact me if you have additional questions.

Sincerely,



Mark Johnsson, Ph.D., CEG, CHG
Staff Geologist

CALIFORNIA COASTAL COMMISSION
45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105- 2219
VOICE AND TDD (415) 904- 5200
FAX (415) 904- 5400

16 September 2002

GEOTECHNICAL REVIEW MEMORANDUM

To: Karl Schwing, Coastal Program Analyst
From: Mark Johnsson, Staff Geologist
Re: DPT LCPA 2-02 (Dana Point Headlands LCP Amendment)

In regard to the above referenced LCP amendment, I have reviewed the following documents:

1) AMEC Earth and Environmental, Inc. 2002, "Headlands Development and Conservation Plan: Geotechnical Evaluation of Shorefront Design Alternatives (Planning Areas 1, 2 and 3), Dana Point, California", 34 p. geotechnical report dated May 2002 and signed by D. Dahncke (GE 2279) and S. T. Kerwin (CEG 1267).

2) Noble Consultants, Inc. 2002, "Headlands Development and Conservation Plan: Supplemental Assessment for shorefront protection alternatives, Dana Point, California", 42 p. report dated May 2002, unsigned.

3) Dr. Scott Jenkins Consulting, 2002, "Evaluation of coastal processes effects associated with removal of the revetment from the Headlands Development and Conservation Plan", 72 p. report dated 2 May 2002 and signed by S. A. Jenkins and J. Wasyl.

In addition, I visited the site on 20 February 2002.

The documents cited above were compiled to help address the question, posed by staff during the 20 February 2002 visit of the site, of whether the site could be developed either with the existing revetment in place, or with the removal of the existing revetment. The scope of this review is to assess the degree to which these above referenced documents, together with the Dana Point Headlands Conservation Plan, adequately answer those questions. This is a necessary part of the analysis of the feasibility of developing "The Strand" area in such a way that the new development will "assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs," as required by Section 30253 of the Coastal Act.

Two key questions relate to this analysis: 1) Can the site be developed without reliance on a shoreline protective device (either new, or the existing revetment) such that it will be safe from erosion for its useful economic life (assumed to be 75 years)?; and 2) If the answer to the above is "yes," then will the proposed development contribute significantly to erosion, geologic instability, or destruction of the site?

Taken together, the documents would seem to provide strong evidence that the answer to the first question is "yes." This evidence, though, is all built upon a single model of development—that the grading plan proposed in the Dana Point Habitat Conservation plan is followed and that the

proposed development is situated as currently proposed. The only modification would be a buttress stabilization fill on the seaward edge of the proposed fill slope, and removal of the existing revetment (as the first alternative), or the temporary removal of the existing revetment, and its reconstruction with the same rock in the same location (as the second alternative). With this as a starting point, wave propagation data were used to compute exposure of the buttressed fill slope to wave energy, and an empirical relation between slope retreat and wave exposure was used to arrive at a coastal erosion (bluff retreat rate), which translates to 29 to 87 feet of bluff retreat over the 75 year anticipated design life of the development. This erosion was superimposed on the design fill slope at increments corresponding to 20, 40, 60, and 87 feet of horizontal retreat. Slope stability was analyzed for each amount of horizontal retreat assuming a variety of ground water conditions. Ground water was assumed to rise as a result of the crushing and failure of the internal drain system of the engineered fill slope. This is conservative, and assumes that no mitigation measures are adopted to deal with rising ground water. This analysis results in progressively lower factors of safety as erosion proceeds, much as would be expected. Most of the lowest factors of safety relate to failure at the slope fronting the shoreline, and are best described as a mechanism of bluff retreat. The more problematic global failure of the remaining landslide deposit/fill slope shows much higher factors of safety at all amounts of horizontal retreat. Indeed, at 87 feet of horizontal retreat, expected at the end of the development's life, the factor of safety remains at or above 1.15 under even the most pessimistic assumptions regarding ground water level. While this is certainly well below the 1.5 factor of safety accepted as good engineering practice for new development, it does show that the site will be stable for its expected lifetime. At the design ground water levels, the factor of safety ends up, at the end of the project's design life, at about 1.3.

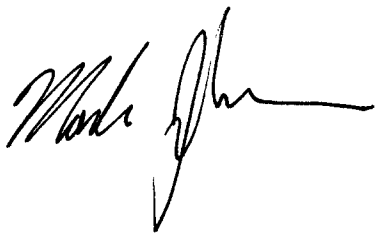
This analysis is reasonable, and seems to indicate that the development would be reasonably safe for its expected design life if sited 87 feet from the edge of the engineered fill slope, plus a reasonable buffer to allow for uncertainty in the analysis, accelerated erosion due to sea level rise, to assure that foundation elements are not actually undermined at the end of the 75-year period, and to allow access for remedial measures, such as movement of the structures. However, uncertainties as to the effects of slope retreat on the drain system may lead the developers to consider an alternative design. Rather than simply superimpose 75 years of erosion on the project as designed, it may be possible to design a buttress fill in such a way that the seaward fill slope lies landward and at a higher elevation than that of the current design. As such, it would be less subject to wave attack, particularly if fronted by a wide sandy "beach" constructed landward of the existing revetment.

These documents predict that the removal of the revetment would have a number of impacts to shoreline retreat, slope stability, water quality, public safety, and to existing and proposed development. These impacts also are expected, although to a lesser degree, if the existing revetment is maintained, rather than a new revetment constructed at the same location. It is important to note, however, that all of the postulated impacts are those normally associated with an eroding shoreline, particularly one made up of an ancient landslide complex, such as this one. These impacts only can be avoided by the continued maintenance of the existing revetment, or a similar structure. It is possible that a redesigned buttress fill with an artificially widened beach may avoid many of these impacts. If so, it would appear that the answer to the second question posed above is "no," and the development could be undertaken in a manner that is consistent

with Section 30253 of the Coastal Act. But the applicants' consultants have so far painted a compelling case that the development, as currently designed, cannot be undertaken so as to: 1) assure stability of the development, 2) not require the construction of protective devices, and 3) not create or contribute significantly to erosion, instability, or destruction of the site and the surrounding area.

I hope that this review is helpful. Please do not hesitate to contact me if you have additional questions.

Sincerely,



Mark Johnsson, Ph.D., CEG, CHG

CALIFORNIA COASTAL COMMISSION
45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105- 2219
VOICE AND TDD (415) 904- 5200
FAX (415) 904- 5400

M E M O R A N D U M

FROM: John Dixon, Ph.D.
Ecologist / Wetland Coordinator

TO: Karl Schwing

SUBJECT: Dana Headlands ESHA Designation

DATE: September 18, 2003

Documents reviewed:

June 9, 2003. Memorandum from P. Mock (URS) to K. Darnall (Headlands Reserve LLC) re "CNDDB Habitat List and Rarity Classification."

June 12, 2003. Letter from K. Darnall (Headlands Reserve LLC) to C. Bean (CCC) re "Headlands LCPA: ESHA Designation."

June 26, 2003. Memorandum from C. Bean (CCC Ecologist) to K. Schwing (CCC) re "Upland ESHA on the Dana Point Headlands Site."

June 26, 2003. Memorandum from P. Mock (URS) to K. Darnall (Headlands Reserve LLC) re "Dana Point Headlands – Clarification of Boundary of Disturbed Native Grassland."

July 21, 2003. Memorandum from P. Mock (URS) to K. Darnall (Headlands Reserve LLC) re "Dana Point Headlands – Clarification of Boundary of Disturbed Native Grassland and Coastal Sage Scrub adjacent to the Bowl Area."

July 22, 2003. Three figures sent by URS via email for use at a July 22, 2003 meeting of Headlands Reserve LLC and CCC staff (1. Figure 2: CSS Vegetation Delineation, 1998 Aerial, Dana Point; 2. Figure 5. CSS Vegetation Delineation, 2003 Aerial, Dana Point-Headlands; 3. Figure x. Proposed [by URS] CCC Boundary, 2003 Aerial, Dana Point-Headlands).

August 8, 2003. Letter from P. Mock (URS) to J. Dixon (CCC) re "Dana Point Headlands LCP Amendment" with enclosure (Section 4.5 of URS biological resources report, February 2002).

August 8, 2003. Memorandum from P. Mock (URS) to K. Darnall (Headlands Reserve LLC) re "Dana Point Headlands – Refinement of vegetation mapping in Hotel and Harbor Point Park areas of the Dana Point Headlands project site."

August 11, 2003. Letter from J. Petrillo (Sheppard Mullin Richter & Hampton LLP) to R. Faust (CCC) re "Headlands Reserve LLC Project, LCP Amendment (2-02) to Dana Point LCP, City of Dana Point, California."

September 10, 2003. Memorandum from P. Mock (URS) to K. Darnall (Headlands Reserve LLC) re "Dana Point Headlands – Refinement of vegetation mapping of the Dana Point Headlands project site."

In her June 26, 2003 memorandum, Caitlin Bean presented the strong empirical basis for delineating Environmentally Sensitive Habitat Areas (ESHA) at the Dana Point Headlands site pursuant to Section 30107.5 of the California Coastal Act. The site contains stands of coastal bluff scrub, maritime succulent scrub, and native perennial grassland, each of which is absolutely rare in California, and coastal sage scrub, over 80% of which has been destroyed by development and which has become absolutely rare in much of the coastal zone. These habitats support numerous resident plant and animal species, many of which are themselves rare. The coastal sage scrub is particularly significant in this regard because it supports as many as eight pairs of nesting California gnatcatchers. In addition, because of their location on a coastal promontory, the Dana Point Headlands habitats provide an important seasonal staging area for migrant birds. Although portions of the site have suffered significant degradation as a result of human activities, the areas delineated by Ms. Bean clearly meet the definition of ESHA in the Coastal Act because of the resident species' and habitats' rarity and/or valuable role in the ecosystem, as well as their susceptibility to further disturbance and degradation. There has been no new information provided in the various documents listed above that alters the facts upon which Ms. Bean based her overall ESHA analysis, although some of the vegetation has been mapped more accurately, resulting in modest changes to the ESHA boundaries. Therefore, I recommend that there be no changes in the species or types of habitat that Ms. Bean recommended for ESHA protection at Dana Headlands.

Some small boundary changes in the northern portion of the site are appropriate as a result of the more accurate vegetation mapping that has recently taken place. Quantitative sampling has demonstrated that some areas along the outer edge of the designated ESHA that were previously designated as perennial grassland are either annual grassland or ruderal vegetation. The ESHA boundary shown in the attached Figure 1 follows the revised boundaries of perennial grasslands.

In his August 8, 2003 memorandum to Kevin Darnall, Pat Mock documented with photographs that the proposed hotel site and the proposed Harbor Point Park site have been degraded by human disturbance and contain trails, clearings, and weeds. In a follow-up memorandum dated September 10, 2003, Dr. Mock recommended significant changes to the vegetation map. However, unlike the earlier studies of the perennial grassland area, no quantitative data were presented to justify the changes. Based on the revised vegetation map, Dr. Mock then recommended changes to the ESHA boundary that would remove the sites proposed for the hotel and the Harbor Point Park from the ESHA designation. The areas proposed to be removed from the ESHA designation include vegetation characterized on the revised vegetation map as "disturbed/ruderal," "southern mixed chaparral," or "disturbed coastal sage scrub." Regardless of whether quantitative sampling would justify the "disturbed/ruderal"

designation within the delineated patches of vegetation[1], I think the proposed changes are inappropriate because these areas are small relative to the area of native habitat and are imbedded within or are bounded on 2 or more sides by that larger habitat. Based on the latter consideration and on the fact that these patches apparently were previously dominated by native coastal scrub species, I think it ecologically appropriate now to consider all these areas as disturbed coastal sage scrub.

The disturbed nature of portions of the site does not appear to be a new condition or a condition that was previously misinterpreted. The areas proposed for removal from ESHA designation are generally trails or clearings and adjacent areas. They are relatively small and contiguous with, or bounded by, less disturbed habitat, adjacent to gnatcatcher sightings, and qualitatively similar to other areas of disturbed ESHA on the site for which no boundary changes have been suggested. It is my opinion that the acceptance of the proposed boundary changes would constitute an inappropriate ecological gerrymander. Therefore, the boundary revisions in the southern portion of the site proposed by Dr. Mock have not been included in Figure 1.

There are also four issues that have been raised by Joseph Petrillo that require comment. First, in his August 11, 2003 letter, at pages 1 and 8, Mr. Petrillo suggests that it is Commission staff's position that coastal sage scrub always constitutes ESHA. This is not the case. Staff always conduct a site-specific analysis, as was done for Dana Headlands. In fact, Ms. Bean excluded some small patches of relatively pristine coastal sage scrub from the ESHA boundary because they were isolated, surrounded by non-native vegetation, and not occupied by gnatcatchers.

Second, Mr. Petrillo states that the wildlife agencies "documented" that the Headlands does not contain rare or especially valuable habitat . However, he provides no citation and the only evidence of documentation is the assertion that the NCCP/HCP is based upon principles of conservation biology developed by the resource agencies in coordination with a panel of conservation biology luminaries. Although it is true that the NCCP/HCP is broadly based on general principles of conservation biology, the application of those principles is constrained by the realities of property ownership and development needs and, in any event, has no bearing on a site-specific ESHA determination. In fact, this site has supported up to eight nesting pairs of gnatcatchers for at least 10 years. That in itself is ample evidence of the presence of especially valuable habitat. Mr. Petrillo points out that, "[t]he 1996 NCCP/HCP represents CDFG's final strategy for resource management, preservation, and mitigation to address development impacts along the central Orange County coast, including the Headlands site." In the context of an NCCP, it may well be a good "strategy" to write off the Headlands habitats in favor of others. However, the fact that the Headlands was not included within a preserve is not evidence that the habitats that are present are

[1] There is always a subjective component to vegetation characterizations that are not based on quantitative sampling. For example, on our May 30, 2003 site visit, Ms. Bean and I noticed that the northern area designated "southern mixed chaparral" contained a significant admixture of typical coastal sage scrub species. Whether to call such an area "transitional," "degraded coastal sage scrub," or degraded "southern mixed chaparral" is a matter of judgment.

common or without special ecosystem values. The NCCP process is based on compromise and is intended to protect large contiguous blocks of habitat and important dispersal corridors, while facilitating development. These plans always sacrifice some valuable habitat in order to accomplish the overall goal of significant regional resource protection. Inclusion or exclusion in such a plan is simply not germane in the context of an ESHA designation. Similarly, the fact that some ESHA is not included within a preserve is not a negative reflection on an NCCP.

Third, Mr. Petrillo argues that an ESHA determination under Section 30107.5 of the Coastal Act, "...must be made via a 3-part test:

1. Is the area one in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem; (Pub. Res. Code § 30107.5)
2. Could the area be easily disturbed or degraded by human activities or development; (Pub. Res. Code § 30107.5)
3. Does the area's viability, or any other characteristics, place it outside of consideration for protection as ESHA. (Bolsa Chica Land Trust v. Superior Court (1999) 71 Cal. App. 4th 493, 508)."

In their actions, the Commission always applies the first two of those tests, but not the third. Indeed, the third item is not a "test" with a threshold that must be reached before an area can be considered ESHA . On the other hand, the Commission always bases its ESHA decisions on a site-specific analysis that takes into account the actual condition, or "viability," and other characteristics of the resource on the ground at the time. For example, in the case of the Catellus application, the Commission decided that the coastal sage scrub along the bluff above the Ballona wetlands was not ESHA because it was so degraded that it no longer played an ecological role in the ecosystem that rose to the level of "especially valuable." At Marblehead, the Commission similarly decided that the coastal sage scrub was so degraded that coastal sage scrub habitats, *per se*, did not meet the definition of ESHA. However, despite the poor viability of the native vegetation itself, some of those areas continued to support successful nesting by California gnatcatchers, and such areas were designated ESHA because they were especially valuable due to their role in the ecosystem.

In the Bolsa Chica decision that Mr. Petrillo cites, the court wrote: "We do not doubt that in deciding whether a particular area is an ESHA within the meaning of section 30107.5, Commission may consider, among other matters, its viability."[2] and "There is simply no reference in section 30240 which can be interpreted as diminishing the level of protection an ESHA receives based on its viability. Rather, under the statutory scheme, ESHA's, whether they are pristine and growing or fouled and threatened, receive uniform treatment and protection."[3] I believe that the Commission's recent

[2] Bolsa Chica Land Trust v. Superior Court (1999), 71 Cal. App. 4th 493, 508.
[3] Id.

actions (e.g., Catellus and Marblehead), and staff's recommendations at Dana Headlands are in complete harmony with this guidance.

I also would like to point out that the notion of "viability" does not contain a long-term temporal component. "Viability" is defined as "capable of working, functioning, or developing adequately" and as "capable of existence and development as an independent unit." However, there is a tendency among some to confound the current viability of a habitat with its potential future state, and to declare that if the perceived prognosis for long-term existence is poor, that the habitat has low "viability." The Commission and staff include the current condition and viability of habitat in their ESHA analysis, but not the potential for long-term viability. The former is based on empirical evidence whereas the latter is always speculative, even when based on a (assumption-ridden) demographic model. For example, the long-term viability of gnatcatcher populations at both Marblehead and Dana Headlands has been questioned; however, at both locations, nesting for ten years or more (and fledging at Marblehead) has been documented, which is sufficient evidence that those areas have been and are currently "especially valuable." The consideration of estimated long-term viability is perhaps appropriate in the context of an NCCP, but not in the context of an ESHA determination.

Fourth, Mr. Petrillo suggests on page 7 of his letter that only relatively pristine sites can qualify as ESHA because the ESHA test of being "easily disturbed or degraded by human activities" cannot be met if a site has already suffered significant disturbance and degradation. This interpretation would remove from ESHA consideration nearly all rare and especially valuable habitats in the coastal zone because nearly all habitats have been significantly impacted by past and on-going human activities. The Commission has often designated significantly disturbed and degraded habitats as ESHA. Gnatcatcher occupied CSS at Marblehead and eucalyptus trees used by raptors at the Bolsa Chica mesa are two relatively recent examples. The Commission's approach appears to be consonant with the previously cited opinion of the Bolsa Chica court that "fouled" ESHA is worthy of protection. With regard to Mr. Petrillo's argument that the Dana Point Headlands site "is not vulnerable to disturbance and degradation because it already is significantly disturbed and degraded," consider the rapidity and ease with which a single person on a bulldozer could remove the remaining acres of gnatcatcher-occupied, but degraded coastal sage scrub, converting it to bare ground with essentially no habitat value.

Finally, I would like to address the issues of ESHA buffers and habitat management. The residential development that is proposed for the Dana Point Headlands, even without the portions that would fall within ESHA boundaries, will bring with it significant threats to the integrity and continued functioning of the ESHA that is currently present. Section 30240(b) of the Coastal Act requires that development be sited and designed to prevent impacts that would significantly degrade adjacent ESHA. In order to prevent such impacts, I recommend that buffers that are at least 50 feet wide be established around all areas designated as ESHA and that the outer edge of the buffer be delineated with a fence that is impervious to dogs. Adjacent to new residential areas, the fence should be constructed of block material with no openings and be at least 6

feet high. Within the buffers, all exotic vegetation should be removed and appropriate native species reestablished. Such fenced buffers will inhibit incursions by people and pets, inhibit the spread of ornamental vegetation, and reduce the intensity of noise, visual stimuli, and light pollution. Despite such precautions, the increased human presence will have negative effects on coastal resources. To mitigate those effects, I recommend that existing degraded ESHA be restored and that a habitat management plan be completed and funded in perpetuity. This would provide a vehicle for public education, informative signs, weed control, trail maintenance, and on-going needs for repair and restoration. I think that some development could take place within the ESHA buffers without significantly adversely affecting the ESHA. Trails constructed of water-permeable materials, informative signs, and benches could be placed in the 20 feet of the buffer most distant from the ESHA and as near to the outer edge of the buffer as feasible. A few small picnic tables might also be acceptable if a funded management plan was in place that would insure that closed garbage cans were available and frequently emptied. Fences impervious to dogs should bound any trails and other use areas. The buffer could also be part of a fuel modification zone that required no more disruptive activities than thinning and removal of dead plant material. For buffer areas that currently are dominated by exotic vegetation, limited grading could be allowed if no permanent structures (including walls for hillside support) were constructed and if the area were then immediately restored to coastal sage scrub and made part of a funded management plan.

Figure 1

EXHIBIT# 15a
Page 7 of 7
Application #:
DPT-LCPA-2-02
California Coastal Commission

CALIFORNIA COASTAL COMMISSION
45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105- 2219
VOICE AND TDD (415) 904- 5200
FAX (415) 904- 5400

M E M O R A N D UM

TO: Karl Schwing

FROM: Caitlin Bean

SUBJECT: Upland ESHA on the Dana Point Headlands Site

DATE: June 26, 2003

Documents Reviewed:

Atwood, J. L., S. H. Tsai, C. H. Reynolds, J. C. Luttrell and M. R. Fugagli. 1998. Distribution and population size of California gnatcatchers on the Palos Verdes Peninsula, 1993-1997. Western Birds. 29:340-350

Beauchamp, M. April 1993. Report of a Biological Assessment of the Dana Point Headlands. Unpublished report prepared for Phillips/Brandt/Reddick.

Bomkamp, T. (Glenn Lukos and Associates). April 15, 2003. Letter to Mike Reilly (Chair of the California Coastal Commission) re: Dana Point Local Coastal Program Amendment No 2-02, response to Mr. Fred Roberts' letter of January 28, 2003

Bomkamp, T. (Glenn Lukos and Associates). February 10, 2003. Letter to Meredith Osborn (CDFG) re: Relocation of Blochman's dudleya associated with the headlands Development and Conservation Plan, City of Dana Point, Orange County.

Bomkamp, T (Glenn Lukos and Associates). December 2, 2002. Focused Plant Surveys during Survey Year 2002, Dana Point Headlands, Dana Point, Orange County, CA. Unpublished report.

BonTerra Consulting. February 1998. Dana Point Headlands – Biological Resource Survey and Analysis. Unpublished report prepared for the City of Dana Point.

Brylski, P. 1998. Pacific Pocket Mouse (*Perognathus longimembris pacificus*) Recovery Plan. Published by the USFWS Region 1, Portland Oregon.

Brylski, P. August 1993. A focused Survey for Pacific Pocket Mouse on the Dana Point Headlands, Orange County, CA. Unpublished report prepared for EDAW.

California Natural Diversity Data Base (CNDDB). 2002. List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Data Base. Wildlife and Habitat Data Analysis Branch. California Department of Fish and Game.

California Department of Fish and Game. December 1995. Draft Natural Community Conservation Plan and Habitat Conservation Plan. County of Orange Central and Coastal Subregion. Appendices Vol. 1 or VI (Part 1-6). Prepared for Orange County.

Darnell, K. June 12, 2003. Memo to Caitlin Bean (CCC) re: Headlands LCPA: ESHA Designation.

Dodd, S. and S. Montgomery. July 5, 2001. Vegetation Thinning Experiment on the Dana Point Headlands, Orange County, CA. Unpublished report prepared by for USFWS and CDFG.

Dodd, S., D. Laabs, and J. Greene Final Report dated March 19, 1999. 1998 Pacific Pocket Mouse Surveys on the Dana Point Headlands, Orange County, CA. Unpublished report prepared for USFWS, CDFG, and the Nature Reserve of Orange County.

Dodd, S., P. Brylski, and D. Laabs. Final Report dated May 18, 1998. 1997 Pacific Pocket Mouse Surveys on the Dana Point Headlands, Orange County, CA. Unpublished report prepared for USFWS, CDFG and the Nature Reserve of Orange County.

Erickson, R. A., 1993. Pacific Pocket Mouse (*Perognathus longimembris pacificus*). Draft manuscript prepared for inclusion in Endangered Rodents of the World, to be published by the Species Survival Commission of the International Union of the Conservation of Nature and Natural resources (IUCN).

Erickson, R. (LSA) and Friesen, R (URS) Letter to D. Marquez (USFWS) dated September 19, 2002. Dana Point Headlands Pacific Pocket Mouse Survey, August 18 – September 1, 2002.

Federal register. March 30 1993. Determination of Threatened Status for the Coastal California Gnatcatcher. Final Rule. Vol. 58 No. 59

Findings and facts in support of findings regarding the Central and Coastal Subregion Natural Community Conservation Plan/Habitat Conservation Plan joint programmatic Environmental Impact Report No 553 (SCH No. 93071061) and Draft Environmental Impact Statement 95-59. April 1996. Appendix A

Friesen, R. and P. Mock (URS Corporation). September 3, 2001. Current Status and Viability Assessment of Pacific Pocket Mouse Population on Dana Point Headlands. Prepared). Appendix D of EIR.

Hayes, G. 2002. DRAFT Conservation Strategy for Coastal Prairie Conservation. Unpublished report submitted to CCC

Holland, R.F. 1986. Preliminary descriptions of the terrestrial natural communities of California. Non-game Heritage Program. California Department of Fish and Game

Implementation Agreement (IA). 1996. IA regarding the Natural Community Conservation Plan for Central/Coastal Orange County Subregion of the Coastal Sage Scrub Natural Community Conservation Program.

James, R. (USFWS). 1996. Memo to whom it may concern. Fieldwork on the Dana Point Headlands, August 27 – September 6, 1996 conducted by USFWS and CDFG personnel.

Jennings, M. and M. P. Hayes. 1994. Amphibian and reptile species of special concern in California. Final report submitted to California Department of Fish and game. Contract No. 8023

LSA Associates, Inc. February 2002. Final Environmental Impact Report Headlands Development and Conservation Plan.

Meade, R.J. 1995. DRAFT Central and Coastal Subregion Natural Community Conservation Plan/habitat Conservation Plan. Parts I and II: NCCP/HCP. Prepared for County of Orange, USFWS and CDFG.

Miller, W. (USFWS) Memo dated June 12 2002. Summary of 2001 Dana Point Headlands Temporary Pacific Pocket Mouse Preserve Trapping Effort, City of Dana Point, Orange County. Prepared for the Pacific Pocket Mouse Recovery File.

Miller, W. (USFWS) Memo dated December 23, 2002. Summary of 2002 Dana Point Headlands Temporary Pacific Pocket Mouse Preserve Monitoring Efforts, City of Dana Point, Orange County.

Mock, P. June 26, 2003. Memo to Kevin Darnell (Headlands Reserve LLC) re: Dana Point Headlands – Clarification of boundary of disturbed native grassland.

Mock, P. June 9, 2003. Memo to Kevin Darnell (Headlands Reserve LLC) CNDDB Habitat List and Rarity Classification.

Mock, P. (URS). November 21, 2002. Memo to Kevin Darnell (Headlands Reserve LLC) Re: Dana Point Headlands Biological Surveys.

Mock, P. (URS) Letter to Kevin Darnell (Headlands Reserve LLC) dated September 18, 2002. Update on the Current Status and Viability Assessment of Pacific Pocket Mouse Population on Dana Point headlands.

Noss, R. F., E.T. LaRoe III and J.M. Scott. 1995. Endangered ecosystems of the United States: a preliminary assessment of loss and degradation. Biological Report 28. national Biological Service, U.S. Dept of Interior.

Roberts, F. (CNPS). June 9 2003. Letter to Mike Reilly (Chair of the California Coastal Commission) re: Dana Point Local Coastal Program Amendment No.2-02: Response to Glenn Lukos and Associates letter of April 15, 2003.

Roberts, F. (CNPS). May 16, 2003. Letter to Karl Schwing (Coastal Program Analyst) re: Additional background information for the Dana Point Headlands.

Roberts, F. (CNPS). March 3, 2003. Letter to Mike Reilly (Chair of the California Coastal Commission) re: Additional information regarding the status of Blochman's Dudleya (*Dudleya blochmaniae* ssp *blochmaniae*) on the Dana Point Headlands.

Roberts, F. (CNPS). January 28 2003. Letter to Mike Reilly (Chair of the California Coastal Commission) re: Sensitive plants at the Dana Point headlands.

Roberts, F. (CNPS) June 27, 2002. Letter to Meredith Osborn (CDFG) re: Potential transplantation sites for the rare plant Blochman's dudleya (*Dudleya blochmaniae*) in Orange County and San Diego County, California

Roberts, F. (CNPS). December 22, 2002. E-mail to Caitlin Bean (CCC) re: Dana Point.

Roberts, F. (CNPS). November 16 2001. Letter to Ed Knight (City of Dana Point) re: Comments of the Draft Headlands development and Conservation Plan EIR.

Teresa, S. (Center for Natural Lands Management). May 25, 2000. Headlands Reserve Property Analysis Record. Unpublished report prepared by for Kevin Darnell (Headlands Reserve LLC).

Tibor, D. (ed.). 2001. California Native Plant Society's Inventory of rare and Endangered Vascular Plants of California. California Native Plant Society Special Publication Number 1, 6th edition, Sacramento, California.

Tippetts, B. (CDFG) February 15, 2002. Letter to CCC re: Dana Point headlands Project and Conservation issues

URS Corporation. September 2001 Attachment B: EIR Section 4.3 Terrestrial Biological Resources Errata and the Biological Resources Report, The Headlands, Prepared for the City of Dana Point

Westman, W.E. 1981. Diversity relations and succession in California coastal sage scrub. Ecology 62:170-184

DRAFT Agreement for the Dana Point Headlands Trust. Dated November 15, 2001.

The purpose of this memorandum is to summarize the biological conditions in the upland portions of the Headlands Development and Conservation Plan (HDCP) project site and to make recommendations regarding the designation of Environmentally Sensitive Habitat Areas (ESHA) present on the site. The recommendations are based on the information in the documents reviewed and on several visits to the site.

Environmentally sensitive habitat areas are defined in Section 30107.5 of the California Coastal Act as follows:

> Environmentally sensitive area" means any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.

There are three tests to consider:

(1) Is a habitat or species rare?
(2) Is a habitat or species especially valuable because of its special nature or role in the ecosystem?
(3) Is the habitat or species easily disturbed or degraded by human activities and developments?

Setting: The HDCP site, also known as the Dana Point Headlands, is one of the last undeveloped coastal promontories in Southern California. The 121.3-acre project site is located in the City of Dana Point in Orange County. Topography on the site is varied. The highest elevation on the site is a conical hill that is approximately 288 feet high. The northern portion of the site is the location of a former trailer park. Some of the ancillary improvements including roads, a clubhouse, and tennis courts, still exist. The trailer park, and the steep eroded hillside to the south of it, is referred to as “the strand.” The hillside has been disturbed in the past by the creation of water control structures and has been invaded by the invasive exotic, ice plant (*Carpobrotus edulis*). Slope gradients along the hillside range from 1.5:1 to 2:1 (URS 2001). A former nursery facility is located east of the strand and south of Coast Highway and consists of greenhouses, ornamental plantings and disturbed areas. South and east of the nursery facility lies a large patch of coastal sage scrub (CSS) with patches of southern coastal bluff scrub occurring along the top of the coastal bluffs. Maritime succulent scrub occurs in the hilltop area and southern needlegrass grassland occurs near the Pacific Coast Highway, in the southern portion of the site. Southern mixed chaparral occurs along the southern parcel boundaries closest to the harbor.

The western and southwestern portions of the HDCP site are underlain with sandy soils and the hilltop area is underlain with clay soils. The upper headland is located on a terrace that extends seaward to coastal bluffs that are from 155 to 220 feet in height (URS 2001).

Dana Point Marine Life Refuge and the Niguel Marine Life Refuge lie immediately offshore of the Dana Point headlands site. Doheny Marine Life Refuge lies to the south. These refuges have been so designated due to the high quality of the marine resources that occur there (Beauchamp 1993).

The upland ESHA at the HDCP site is defined by the presence of rare vegetation, the presence of special status plant species and the presence of special status wildlife including the presence and habitat required of the Federally threatened California gnatcatcher (*Polioptila californica californica*) and the Federally endangered Pacific pocket mouse (*Perognathus longimembris pacificus*).

Special-status Species Plants: Fourteen special-status plant species have been identified on the HDCP project site over time. Not all special status plants listed in Table 1 have been observed during each plant survey. The occurrence of some of these species has been influenced by drought and ongoing impacts from recreational uses. However, at one time or another each of these species has been observed on the site. This serves to illustrate the point that native communities on-site function as habitat for a large suite of special status species. Floristically, this site is more diverse than sage-scrub found in most locales in the region (Beauchamp 1993). Coastal sites with this much diversity are uncommon (Roberts June 2003). The unusually large number of special status plant species observed on this site over time is an indication of the unique nature of this setting. More rare plants are known from the Dana Point Headlands than from Crystal Cove State Park, which is 20 times the size (Roberts January 2003).

Table 1. Special status plant species documented on the Headlands

Blochman's dudleya	CNPS List 1B
Coulter's saltbush	CNPS List 1B
Nuttall's scrub oak	CNPS List 1B
Cliff spurge	CNPS List 2
Vernal barley	CNPS List 3
California box-thorn	CNPS List 4
Woolly seablight	CNPS List 4
Western dichondra	CNPS List 4
Small flowered microseris	CNPS List 4
Cliff malocothrix	CNPS List 4
Palmer's grappling hook	CNPS List 4
Golden rayed pentacheata	CNPS List 4
California groundsel	CNPS List 2
prostrate spineflower	de-listed but rare

Focused rare plant surveys were conducted on the project site in 1991, 1998, 2000, 2001 and 2002. Additionally, members of the California Native Plant Society (CNPS) have monitored the site informally since 1983. The species identified in Table 1 have been given rarity designations by a multi-agency panel of experts that are coordinated

by CNPS. CNPS List 1B species are those species that are rare, threatened or endangered in California and elsewhere. These species are eligible for state listing and it is mandatory that they be fully considered during the preparation of environmental documents relating to CEQA. CNPS List 2 species are those species that are rare, threatened or endangered in California but more common elsewhere. These species are also eligible for state listing and it is mandatory that they be fully considered during the preparation of environmental documents. CNPS List 3 species are plants that lack the necessary information to assign them to one of the other lists or to reject them. This is a review list of sorts. CNPS List 4 species are plants of a limited distribution. This list is considered a "watch list." While these species cannot be considered "rare" from a statewide perspective, they are uncommon enough that their status should be monitored Many of them are significant locally and CNPS strongly recommends that they be evaluated during the preparation of CEQA documents (Tibor 2001).

Rarity describes at least three different biological possibilities. A rare taxon can be 1) broadly distributed but never abundant, 2) narrowly distributed and abundant where it occurs, or 3) narrowly distributed and not abundant where it occurs. CNPS List 3 and 4 species may be "rare" depending on the species and the scale at which the question is being asked. Some of the CNPS List 4 species in Orange County are only known from one or two locations (Roberts June 2003). These plants are considered rare in Orange County even if they are more common or broadly distributed elsewhere (Roberts June 2003).

Blochman's dudleya (*Dudleya blochmaniae* ssp *blochmaniae*) is a diminutive, herbaceous, corm-sprouting perennial that occurs in stony dry places below 1,500 feet in elevation. It is a CNPS 1B species and one of the more restricted rare plants in California (Roberts Nov. 2001). This species is known from fewer than 20 locations range wide. In Orange County it is known from 3 locations (Roberts Nov. 2001). South of the Santa Monica Mountains, Blochman's dudleya has experienced a 70% decline in suitable habitat (Roberts June 2002).

The HDCP site supports the largest continuous block of suitable habitat for Blochman's dudleya outside of military lands in Orange and San Diego County (Roberts June 2002). The population on site is generally located in the hilltop area on clay soils. It has experienced fluctuations in size due to variation in rainfall and from recreational use impacts. Heavy foot traffic and vehicle traffic have degraded and continue to degrade the relatively open terrain where this plant occurs.

Coulter's saltbush (*Atriplex coulteri*) is a small perennial herb that occurs within the coastal bluff scrub near Harbor Point and the CSS in the upper headland area. It is rare and declining in it's range and is listed on CNPS list 1B. There are 12 known occurrences of this species on the mainland, 6 of which are in Orange County (URS 2001). There are approximately 20 occurrences known from the Channel Islands (Bomkamp 2003).

Nutall's scrub oak (*Quercus dumosa*), represented by a single individual, was documented in CSS near the former nursery. This species occurs in loose sandy soils and has been identified on CNPS list 1B. Nutall's scrub oak is typically restricted to CSS and chaparral habitats within ten miles of the coast (URS 2001). Since the early 1980's, this is the only individual that has been identified on the site (Bomkamp 2002).

Cliff spurge (*Eupohorbia misera*) is a 2 to 3 ft high shrub that occurs in the coastal bluff scrub on-site and is listed by CNPS on List 2. Habitat occupied by this shrub corresponds to the area mapped as coastal bluff scrub (Beauchamp 1993). This locale is significant since it is well north of the most of the documented occurrences of the species (Beauchamp 1993).

Vernal barley (*Hordeum intercedens*) is a small annual grass associated with clay soils. It occurs near the hilltop and in the Harbor Point vicinity. It is included on CNPS list 3. It is uncommon in Orange County (Roberts Nov. 2001). Small stands of this species were observed adjacent to areas disturbed by recreational uses (Bomkamp 2002).

California box-thorn (*Lycium californicum*) is a shrub species associated with coastal bluff scrub and coastal sage scrub. At the HDCP site, it primarily occurs along the cliffs. It was added to CNPS list 4 in 2000 (Roberts Nov. 2001). It was estimated that 20 to 30 clumps or isolated shrubs occur in eleven locations on-site (Bomkamp 2002). One large individual was found in CSS on site co-occurring with Blochman's dudleya in the hilltop area (URS 2001).

Woolly seablight (*Suaeda taxifolia*) is an evergreen shrub that occurs along the coastal bluffs. It is typically associated with clay or poorly drained soil along the outerslopes of the bluffs near the beach (Bomkamp 2002). It was added to CNPS list 4 in 2000. There are two occurrences of this species in the strand area and one south of the northern residential enclave.

Western dichondra (*Dichondra occidentalis*) was observed on the north and east facing slopes that overlook the "bowl" near the center of the site (Bomkamp 2002). In 1993 a 3-acre fire burned a portion of the upper headlands and dichondra was abundant throughout the burn area (Roberts Nov 2001). Few visible plants are there today but it may be dormant waiting for another fire or similar disturbance (Roberts, e-mail: Dec 2002). Scattered patches were observed in an area covering about 1.5 acres in 2002 (Bomkamp 2002). This is a CNPS list 4 species. This occurrence is considered to have significance due to the limited extent of this species in Orange County (Beauchamp 1993).

Small flowering microseris *(Microseris douglasii* var. *platycarpa*) occurs on clay rich soils near the northern edge of the hilltop (Bomkamp 2002). A very small population of ten plants was observed in 2002. However, this was a drought year suggesting that there are probably more than ten individuals in a good year (Roberts, e-mail: Dec 2002). This is a CNPS list 4 species.

Cliff malocothrix (*Malocothrix saxatilis* var. *saxitilis*) is CNPS list 4 species that has never before been documented in Orange County (Roberts, e-mail: Dec 2002). It was previously known from Ventura County northward. This may have been a misidentification of the more widespread *Malocothrix saxatilis* var. *tenuifolia*, which is the common form in Orange County (Roberts, e-mail: Dec 2002). However, if it were cliff malocothrix, this location of would be a range extension for the species. Four individual plants were identified in two patches in the strand area (Bomkamp 2002).

Palmer's grappling hook (*Harpagonella palmeri*) is an inconspicuous annual identified on CNPS List 4. It is known to occur on clay soils and recently burned areas below 3,280 ft in elevation. This species has been observed on the site sporadically since 1983 (Roberts, e-mail Dec 2002). It was documented in the margin of a small barren on a grassy hillside with elements of CSS.

Golden-rayed pentachaeta (*Pentachaeta aurea*) is a CNPS List 4 species that was first documented on the project site in 1983, and has been observed virtually every year since (Roberts, e-mail Dec 2002). It occurs in grassy openings and barrens amongst CSS north of Scenic Drive (URS 2001).

California groundsel (*Senecio aphinactis*) is on CNPS list 2. It has been rarely detected on the site since 1983 (Roberts, e-mail Dec. 2002). It is a small and obscure plant that is only known from 3 recent collections in Orange County (Roberts Nov. 2001). It was documented on-site in a small cobble covered barren on a grassy hillside adjacent to CSS (Roberts, e-mail Dec. 2002).

Prostrate spineflower (*Chorizanthe prostrata*) was once considered a CNPS List 4 species but has since been de-listed. It is still considered locally rare by the Orange County Chapter of CNPS. Prior to 1998, this plant species was identified on the westernmost bluffs near the steep cliffs and near the existing off-site apartments and the paved road west of the nursery (Beauchamp 1993), in the sandiest areas (URS 2001).

Wildlife: Seven special status wildlife species have been observed on the HDCP property over time (Table 2). Of particular interest, is the presence of the federally protected California gnatcatcher and Pacific pocket mouse.

Table 2. Special Status Wildlife Observed on the Headlands Property Since 1991

California gnatcatcher	Federally threatened
Pacific pocket mouse	Federally endangered
Cactus wren	State Species of Concern
Orange throated whiptail	State Species of Concern
San Diego woodrat	State Species of Concern
Coronado skink	State Specie of Concern
White-tailed kite	Fully protected
Quino checkerspot butterfly	Federally endangered

During surveys conducted in 1991 at least 9 and possibly 11 gnatcatchers were documented on site. These individuals were thought to represent 8 pairs. According to Beauchamp (1993), “Gnatcatcher populations of such a high density are rarely observed in Orange County.”

The Pacific pocket mouse was thought to be extinct before it was rediscovered on the Headlands property. There had been no confirmed record for over 20 years (Erickson 1993). Over 80% of all the known records of this species were made between 1931 and 1932, and almost 95% of those were made from just four locations (Erickson 1993). This suggests that this species has long had a restricted range, which calls into question the likelihood of successfully establishing new populations.

Bird diversity on the site is very high (Beauchamp1993). During a three-day spring census in 1993 a total of 73 species of birds were observed (Beauchamp 1993). Beauchamp (1993) writes, “This is a rather large number of species in light of the limited size of the site; however, headland areas have desirable features not found in other less prominent coastal sites.”

The 1993 surveys also documented many species of migrating birds. An unusual concentration of 9 species of warblers was observed. “The relatively high concentration of warbler activity underscores that this is a seasonal staging area for migrant birds” (Beauchamp 1993). Beauchamp (1993) states that, “The position of the headlands jutting into the ocean, and the concentration of exotic trees there can act as a temporary migrant “trap” for birds wishing to alight for a short period of insect foraging or good protective cover before continuing their migration.”

California gnatcatchers were documented on the Headlands site during surveys conducted in 1991 and 2000. An estimated eight pairs of gnatcatchers nested on site in 1991 and at least 7 pairs nested there in 2000. The number of gnatcatcher territories on-site have changed little over an almost 10 year period of time. Gnatcatcher territories are well distributed throughout the CSS on-site. Historically, 6 individuals were documented in the hilltop area, 2 in the headland area, 1 in the vicinity of Harbor Point and 1 near the strand. In 2000, 2 gnatcatcher territories were documented in the hilltop area, 2 in the headland area, and 1 near the strand.

Beauchamp (1993) writes, “The substantial on-site population of California gnatcatchers and their observed distribution throughout the sage scrub on-site, underscores the suitability of this localized phase of Diegan CSS for this species, regardless of subtle distinctions between vegetation cover found on the different slope aspects on-site.”

California gnatcatchers were listed as federally threatened in 1993 (Federal Register 1993). This small insectivorous bird occurs almost exclusively in CSS and is threatened by habitat loss and fragmentation occurring in conjunction with urban and agricultural development (Federal Register 1993). This species is non-migratory and defends breeding territories that range in size on the coast from >1 acre to >10 acres (Mock, e-

mail June 2003). The Dana Point population of gnatcatchers is truly one of the last coastal populations in Orange County (Atwood, e-mail Dec 2002).

California Gnatcatchers have somehow persisted in isolated fragments throughout southern California for 50-75 years (since serious fragmentation began). For example, a population at Palos Verdes in Los Angeles County, while at risk of extinction, has persisted for many decades in the face of serious fragmentation and apparent isolation (Atwood et. al 1998). The precautionary principle requires that fragments of CSS habitat should not be eliminated as meaningless to gnatcatchers without evidence to support such a finding. The habitat patch at Dana Point appears to function as an important breeding site, given the persistence and the density of breeding pairs observed on the site.

Areas with significant gnatcatcher use perform an important ecosystem function, are increasingly rare, and are easily disturbed and therefore meet the definition of ESHA under the Coastal Act.

Pacific pocket mouse is the smallest member of the heteromyidae family and is only known from three populations (Brylski 1998). Numerous recent surveys within the historic range of the subspecies have failed to detect additional extant populations (Brylski 1998). The pocket mouse is restricted to sandy substrates within CSS, within 2 miles from the coast (Federal Register 1994). The Recovery Plan for the pocket mouse (Brylski 1998) states:

> "The immediate recovery goal is to avert the extinction of the Pacific pocket mouse by focusing on short-term strategies to improve the subspecies' prospects for survival. Foremost among these are immediate protection and restoration of the existing populations and habitats of the subspecies…. Unless, or until sufficient, additional viable populations are discovered and/or established and protected, it is imperative that existing populations be protected and expanded through active management. Loss or degradation of any of the populations at the three known extant locales could irretrievably diminish the likelihood of species survival. All known extant populations are essential, including the Dana Point Headlands population."

Surveys for Pacific pocket mouse occurred on the HDCP site in 1993, and from 1996 to 2002. Trapping efforts were not consistent. Dates, number of traps, and the locations trapped, varied each year. Therefore, it is not appropriate to compare the results from year-to-year. Although each year fewer individual pocket mice were captured than the year before, it is not possible to determine whether this is a real temporal trend or an artifact of sampling. In 1993, there were a total of between 25 to 36 individuals captured and in 2002 a total of two individuals were captured, one male and one female. These animals have a diet of seeds and insects (Brylski 1998) therefore, in drought conditions their populations are affected by food shortages, which may explain some of the apparent temporal variability.

There has been some debate regarding the amount of potential habitat for this species on the Dana Point Headlands site. The original trapping effort for this species documented its presence within an area of approximately 3.75 acres. However, the survey report states that the "project site contains 41.43 acres of potential habitat (Brylski 1993)." CSS on both the Harbor Point and hilltop areas were identified as potential habitat in the survey report (Figure 2 in the 1993 report).

Due to the fact that there have been a number of severe drought years that have effected this population it is not appropriate to delineate potential habitat based solely on the results of presence/absence surveys. Population densities can fluctuate widely in response to rainfall. In a study conducted on *Perognathus flavus* in Arizona, animals were apparently absent for years and yet later were the most abundant species (Brylski 1998). All appropriate pocket mouse habitat on the HDCP site performs an important ecosystem function and qualifies as ESHA. This habitat is important in order to avert extinction, address recovery goals, and to allow the population of pocket mouse to have an opportunity to expand given the right conditions.

San Diego cactus wren (*Campylororhynchus brunneicapillus sandiegensis*) build their pouch-shaped nests in patches of CSS with cholla cactus and prickly pear. This California species of special concern is declining due to habitat loss from urban development (Beauchamp 1993). Beauchamp (1993) considered this subspecies one of the most endangered birds in California. Two wrens were observed on the HDCP property during 1991 surveys; one was in a small stand of cactus northwest of the hilltop and a second was observed in a larger cactus stand northwest of the dogleg in Green Lantern Road (Beauchamp 1993). Cactus wrens were not observed during surveys conducted in 2000 (URS 2001) and surveys conducted on the site by Audubon volunteers have not documented the species during the last three years (Roberts, e-mail June 2003).

Orange-throated whiptail (*Cnemidophorus hyperythrus beldingi*)**,** another California species of special concern, was thought to be relatively uncommon on-site in 1991 (Beauchamp 1993). Only a single individual was observed. However, the survey took place at a different locale than where it had been previously reported (Beauchamp 1993). In a 1994 analysis of the threats to this species, it was estimated that 75% of its historic range was no longer occupied (Jennings and Hayes 1994). Jennings and Hayes (1994) recommend that this species be listed as State threatened based on loss of suitable habitat, fragmentation, and drought. This species was not detected during the biological surveys conducted in 2000 (URS 2001). However, only a visual survey, an ineffective technique, was conducted for purposes of the EIR. A more effective way to document presence or absence of lizards is to install pitfall trap arrays.

San Diego woodrat (*Neotoma lepida intermedia*) is a state species of special concern associated with CSS and chaparral habitat (Beauchamp 1993). During 1993 surveys woodrat nests were seen at several locales in the CSS.

Coronado skink (*Eumeces skiltonianus interpatietalis*) is also a state species of special concern. One skink was observed on the property under wooden detritus, near the greenhouses, during surveys conducted in 1991 (Beauchamp 1993). At that time it was believed that only a small population was present on the site (Beauchamp 1993). This species was not detected during surveys conducted for the EIR (URS 2001). As noted above a specific survey for lizards was not conducted.

White tailed kite (*Elanus caerulus*) is a fully protected species and has been observed foraging over the grasslands on-site (Beauchamp 1993). However, this species has not been documented nesting on the property (Beauchamp 1993, URS 2001). In addition, other raptors such as northern harrier, sharp-shinned hawk, and Cooper's hawk may forage on the property (URS 2001). It is unclear whether or not surveys for the EIR included nesting surveys.

Quino checkerspot butterfly (*Euphydryas editha quino)* was listed as Federally endangered in 1997. Collections of this species were made on the HDCP site between 1932 and 1936 (Roberts Nov. 2001). Surveys in the 1980's failed to detect this subspecies on the site (Roberts Nov. 2001).

Vegetation Types: Native plant communities on the HDCP project site include, CSS, southern coastal bluff scrub, southern mixed chaparral, and disturbed southern needlegrass grassland. In addition there are disturbed areas and ornamental plantings (Table 3).

Table 3. Dana Point Vegetation Types and Acreages (Based on Figure 4.3.1 HDCP EIR)

Vegetation Type	Acreage
Southern coastal bluff scrub	3.34
CSS	48.07
Disturbed CSS	2.33
Maritime succulent scrub	.61
Southern mixed chaparral	2.69
Disturbed needlegrass	1.65
Non-native grassland	1.28
Developed/ornamental	46.79
Disturbed/ruderal	3.21
Sandy beach	5.22
Rocky intertidal/ bluff face	6.11

Southern coastal bluff scrub is composed of prostrate woody and /or succulent plants that are found on the cliffs, ridgelines, and bluffs adjacent to the ocean on the western and southern edges of the project site. Common species observed in this plant community include lemonadeberry (*Rhus integrifolia*), coastal cholla (*Opuntia prolifera*), dudleya (*Dudleya* sp.), bladderpod (*Isomeris arborea*), California encelia (*Encelia californica*), California sagebrush (*Artemesia californica*), bluff buckwheat (*Eriogonum parvifolium*), and coyote bush (*Baccharis pilularis*). Special status plant species

observed in this community included cliff spurge (CNPS List 2), California box-thorn (CNPS List 4), and Coulter's saltbush (CNPS List 1B).

Development along the Southern California coastline has reduced this geographically restricted plant community throughout its range (URS 2001). Southern coastal bluff scrub is generally recognized as a rare plant community (e.g., Holland 1986, CNDDB 2002). Dana Point is specifically mentioned in the Holland (1986) vegetation classification system as an example of a site where this rare plant community occurs. Coastal bluff scrub is rare and performs the important function as habitat for special status species. In addition, this vegetation community is easily disturbed. Therefore, coastal bluff scrub meets the definition of ESHA pursuant to the Coastal Act.

Diegan coastal sage scrub is composed of low soft woody subshrubs that are about 1 meter in height. Many of the shrubs in this community are drought-deciduous. Diegan CSS is the predominant native vegetation type in the undeveloped coastal portions of Orange County (Beauchamp 1993). This plant community is typically found on dry sites, such as steep, south facing slopes. Common plant species observed in this community include California sagebrush, flat-topped buckwheat (*Eriogonum fasciculatum*), monkeyflower (*Mimulus aurantiacus*), California encelia, goldenbush (*Isocoma menziesii*), coastal prickly pear (*Opuntia littoralis*), lemonadeberry, and coyote bush.

Special status species documented in this community on-site include California gnatcatcher (Federally threatened), cactus wren (species of special concern), pacific pocket mouse (Federally endangered), orange-throated whiptail (species of special concern), Blochman's dudleya (CNPS list 1B), golden rayed pentachaeta (CNPS List 4), Palmer's grappling hook (CNPS List 4), California groundsel (CNPS List 2), Coulter's saltbush, western dichondra (CNPS List 4), Nutall's scrub oak (CNPS List 1B), California box thorn (CNPS List 4), and prostrate spineflower (species of local concern).

The FEIR for the HDCP states, "CSS is considered sensitive by CNPS, CDFG and USFWS…Impacts on CSS are considered significant since this habitat is ranked as 'very threatened' on the CNDDB. CSS is of particular importance in Southern California because it provides habitat for federally threatened coastal California gnatcatcher…. Additional evidence of the decline of this once common habitat is the growing number of declining plant and animal species dependent upon it." Holland (1986) identifies this plant community as "high inventory priority."

It is probably universally accepted among specialists that CSS is easily degraded and in fact, has been destroyed by development over large areas of the state (Westman 1981). About 2.5% of California's land area was once occupied by CSS. In 1981, it was estimated that 85% to 90% of the habitat type had been destroyed statewide and, in 1991, it was estimated that San Diego, Orange, and Riverside counties had lost 66% of their CSS (Westman 1981). Current losses are higher and losses in the coastal zone have undoubtedly been much higher. Compared to its natural distribution and abundance, CSS is in decline and it is in decline because it has been destroyed by

human activities. Unfortunately, this habitat type occupies shallow slopes on lower elevations of coastal mountain ranges and these areas are understandably prized for development.

The CSS habitat on-site that supports rare species and species of limited distribution, is rare and especially valuable for its important role in the ecosystem, and is very easily disturbed by urban development. It therefore qualifies as ESHA under the Coastal Act.

For purposes of our review "disturbed CSS", a vegetation community identified on maps prepared for the FEIR, was addressed in our analysis of CSS (i.e., while there are some areas of disturbed CSS, the value of these patches was not necessarily considered less than that of other areas of CSS). We recognize that there is disturbance within the CSS patch that covers the upper headland due to trespass of hikers and bikers. However, at this site these areas cannot be separated from the functioning system. For instance, the entire patch functions as an intact unit of gnatcatcher habitat.
There is a large contiguous patch of CSS in the southern portion of the Headlands parcel. For purposes of our ESHA map we have identified the patch as three separate polygons that are bisected by the road (Figure 1). There is one polygon each in the headlands area, the hilltop area, and harbor point. The hilltop patch, which is underlain with clay soils, hosts the highest concentration of rare plants. The headlands area, which is underlain with sandy soil, supports the pacific pocket mouse. The entire patch supports all but one of the resident gnatcatcher pairs.

In addition to the large contiguous stand of CSS, there are several small patches in the strand area. CSS has persisted in the strand area where there are steep slopes and very thin or rocky soils. CCC staff surveyed each of these patches to determine if they meet ESHA criteria. Three CNPS List 4 plant species have been documented in the strand area CSS patches: California box-thorn, cliff malocothrix, and woolly seablight (Bomkamp 2002). Both the box-thorn and the seablight occur elsewhere on the property.

The patches of CSS in the strand are fragmented and have a high edge to area ratio limiting their habitat value. Ice plant dominates the landscape surrounding the patches. However. the CSS patch near the northern residential enclave has been occupied by gnatcatchers since 1991. In view of the continued gnatcatcher use, this patch meets the definition of ESHA. Due to their small size and limited habitat value the other patches of CSS within the strand area do not meet the definition of ESHA.

Based on CCC site visits and our review of air photos of the site, it appears that there is a portion of previously intact CSS habitat that was adjacent to the nursery that is no longer present. By overlaying the vegetation map that was created for the EIR (based on an air photo from 1999) onto an air photo taken in 2000, we observed that a portion of the patch of chaparral in the hilltop appears to have been removed during the intervening period. However, it has been suggested by the property owners that this change may be an artifact arising from a map registration error. This issue still needs to be resolved.

Maritime succulent scrub occurs in one small patch on the northeastern portion of the project site. This low, open scrub community is dominated by many of the same drought deciduous species found in the CSS community adjacent to it. However, there is a higher proportion of cactus including coastal cholla (*Opuntia prolifera*) and prickly pear (*Opuntia littoralis*). This plant community is considered rare by CNNDB, is easily degraded and meets the definition of ESHA pursuant to the Coastal Act.

Southern mixed chaparral occurs in several small patches on the eastern boundary of the project site. The dominant plant species in this community include toyon *(Heteromeles arbutifolia*), laurel sumac (*Malosma laurina*) and lemonadeberry. There is a large patch of the non-native ornamental species *Hypericum canariense* in the chaparral patch in the northwest corner of the site. This is a fairly widespread plant community and is not considered rare or especially valuable.

Disturbed needlegrass grassland occurs along the northeastern boundary of the site near the Pacific Coast Highway. This community is characterized by a low to dense cover of the perennial, tussock- forming, purple needlegrass (*Nasella pulchra*) and foothill needlegrass (*Nasella lepida*). In addition, a minor component to the grassland is vernal barley (CNPS List 3). Native and introduced annuals occur between the perennials, often exceeding the bunchgrass in cover. Other plant species observed in this community include native wildflowers such as, blue dicks (*Dichelostemma capitatum*), golden-rayed pentachaeta (CNPS List 4), and common goldenstar (*Bloomeria crocea*) and non-native annual grasses such as *Vulpia myuros* and brome grasses (*Bromus* sp.). Blochman's dudleya was observed on the edge of this plant community.

In California, native grasslands are now exceedingly rare (Noss et al 1995). Needlegrass grassland is considered a community needing priority monitoring and restoration by the CNDDB (Holland 1986). In Southern California, native grasslands are not only extremely rare, they may also support a number of rare plant species (Roberts Nov. 2002).

Grasslands in coastal California vary depending on slope, aspect, and hydrology. As with many plant community types in California, there is a great deal of community composition variation at local and landscape scales. It has been common practice to assess the conservation value of a given native grassland site by recording a visual estimate of the percent cover of perennial native grasses. Data collected from numerous locations throughout the geographic extent of remaining coastal prairie areas suggest that few areas contain more than 15% relative cover of all native perennial grasses (Hayes 2002). Most of the cover in coastal prairie, as with all California grasslands, is provided by exotic species. There are no data on the cover or extent of native grasses prior to the advent of these species, so it is difficult to assess potential cover for native perennial grasses at any site. The conservation value of a given grassland site is indicated by the presence, even in low numbers and in diffuse patches, of perennial bunchgrasses.

In June 2003, URS Corporation biologists conducted an assessment of the perennial grassland cover and species composition at the HDCP project site. Their data showed that a portion of the area previously mapped as needlegrass grassland (URS Corporation 2001) is more accurately classified as non-native grassland. Specifically, Transect 8 had 0% native species cover and only 1 native species was observed. We concur with the finding that this vegetation type should be reclassified from needlegrass grassland to non-native grassland. However, URS Corps (2003) suggests that the data from several other transects (Transects 6 and 7) show that that these areas should also be reclassified. We do not concur with this assessment. The URS report states, "The native perennial bunchgrass *Nasella pulchra* (purple needlegrass) was present in every belt transect except for T8." While purple needlegrass may have been more abundant in the area sampled by Transects 2 through 5 than in Transects 6 and 7, the fact that the needlegrass is persisting in the areas of Transect 6 and 7 indicates that this area is a part of the grassland patch even though it is more degraded than the immediately adjacent core of the patch.

URS Corp (2003) also asserts that a portion of the polygon previously mapped as needlegrass grassland in the FEIR is ruderal, a portion is non-native grassland, and a portion is CSS. In the report it is stated that "No transects were conducted in the area west of the fenceline because a visual assessment of this area confirmed that native taxa were too sparse to classify the area as anything other than non-native grassland or disturbed/ruderal vegetation." A quantitative assessment (visual or otherwise) would provide adequate data for analysis. However, URS Corp. did not provide any estimates of cover or a description of the species composition in these areas. Therefore, we are unable to accept these changes to the vegetation map.

The presence of several species of bunchgrasses in association with native forbs suggests that the needlegrass grassland patch on site may be remnant of original coastal prairie. Perennial grasslands are one of the most heavily impacted native habitats in California. Due to the rarity of this vegetation type, it's susceptibility to disturbance, the diversity of the grassland patch on Dana Point Headlands, and the presence of special status species, the patch of needlegrass grasslands on site meets the definition of ESHA under the Coastal Act.

Other Habitats. There are several other upland land covers on the site that are not sensitive. These areas are identified on the vegetation map **as non-native grassland, developed/ornamental, and disturbed/ruderal**. These areas cover approximately 52 acres of the site. These land coverages primarily occur in the areas that have been used for nursery operations, the trailer park and the hillside slope in between. These areas do not qualify as ESHA. However, some areas adjacent to ESHA may need to be protected in order to prevent impacts to the ESHA on site (Section 30240 (b) of the Coastal Act). We have not attempted to identify the buffer areas necessary to prevent impacts to ESHA on site in this memo or on the attached map. A subsequent analysis will be necessary to address this issue.

Summary: The project site hosts four highly threatened plant communities; coastal bluff scrub, Diegan coastal sage scrub, maritime succulent scrub and needlegrass grassland. These habitats are inherently rare and/or perform important ecosystem functions at the Dana Headlands site by providing habitat for two federally listed wildlife species and up to 13 special status plant species. As such, the site contains ESHA pursuant to the Coastal Act.

Factors determining the location of ESHA include the presence of special status species, gnatcatcher territories, present and historical use of the site by gnatcatchers, and contiguity of habitat. The large contiguous patch of coastal sage scrub on the project site as well as the coastal bluff scrub, needlegrass grassland, and maritime succulent scrub are ESHA. In addition, the small patch of CSS adjacent to the northern residential enclave where a breeding pair of gnatcatchers was observed in 1991 and again in 2000 is ESHA. The boundaries of the upland ESHA on the HDCP project site are shown in Figure 1.


DRAFT
Dana Point Headlands
Upland Environmentally Sensitive Habitat Areas
GNATCATCHER PAIRS
Observed in 1991
Observed in 1991 and 2000
Coastal Sage Scrub Present in 1999*
ESHA Boundaries
Project Boundary
N
250 0 250
Feet
* Based on aerial photography (1/5/99) and vegetation map (11/27/01) provided by URS Corporation.
Note: Delineations on this map are tentative, pending further investigation. Locations approximate. For Illustrative Purposes Only.
Image Base Source: AirPhoto USA, 6/2000
Data Source: Commission site visit: May 2003,
The Keith Companies and URS Corporation: April, 2003
DISCLAIMER:
This is a draft map. Some of the delineations on this map are tentative, pending further investigation. None of the ESHA boundary delineations on this map should be treated as necessarily being indicative of Commission Staff's final determination of the boundaries of the areas that should be considered ESHA.
This map reflects areas on the Dana Point Headlands site that Coastal Commission Staff has tentatively concluded - based, in part, on information provided by the applicant as of the date of this map - constitute environmentally sensitive habitat areas ("ESHA") for purposes of Section 30240 of the Coastal Act (Cal. Pub. Res. Code Sec. 30240).
The determinations that underlie this delineation of the ESHA areas may change with the acquisition of new information. Similarly, Commission Staff's assessment of the location of ESHA may also change over time, as the physical situation on the ground changes. Moreover, the Commission itself is the final arbiter of what the Commission considers to be ESHA. Accordingly, this representation of staff's tentative conclusions - even if they were final - would not necessarily be reflective of the Commission's official position.
Finally, this map is not intended to show, and does not necessarily show, areas where Commission staff believes that development can occur without any negative impact on any coastal resource. This map is only intended to reflect the areas in which environmentally sensitive habitat is present. There may be other coastal resources that would be affected by development on other areas of the site. Consequently, it is not necessarily the case that Commission Staff is prepared to recommend approval of any development on the remaining areas.
CALIFORNIA COASTAL COMMISSION
Technical Services Division Mapping/GIS Unit

Figure 1

DRAFT

Dana Point Headlands

Upland Environmentally Sensitive Habitat Areas

CALIFORNIA COASTAL COMMISSION

Technical Services Division Mapping/GIS Unit

DISCLAIMER:

This is a draft map. Some of the delineations on this map are tentative, pending further investigation. None of the ESHA boundary delineations on this map should be treated as necessarily being indicative of Commission Staff's final determination of the boundaries of the areas that should be considered ESHA.

This map reflects areas on the Dana Point Headlands site that Coastal Commission Staff has tentatively concluded - based, in part, on information provided by the applicant as of the date of this map - constitute environmentally sensitive habitat areas ("ESHA") for purposes of Section 30240 of the Coastal Act (Cal. Pub. Res. Code Sec. 30240).

The determinations that underlie this delineation of the ESHA areas may change with the acquisition of new information. Similarly, Commission Staff's assessment of the location of ESHA may also change over time, as the physical situation on the ground changes. Moreover, the Commission itself is the final arbiter of what the Commission considers to be ESHA. Accordingly, this representation of staff's tentative conclusions - even if they were final - would not necessarily be reflective of the Commission's official position.

Finally, this map is not intended to show, and does not necessarily show, areas where Commission staff believes that development can occur without any negative impact on any coastal resource. This map is only intended to reflect the areas in which environmentally sensitive habitat is present. There may be other coastal resources that would be affected by development on other areas of the site. Consequently, it is not necessarily the case that Commission Staff is prepared to recommend approval of any development on the remaining areas.

DRAFT

Dana Point Headlands

Biological Resources (as shown on City's Original Submittal) and Location of ESHA Boundary as Initially Recommended

Exhibit 15d

- Developed/Ornamental
- Disturbed/Ruderal Habitat
- Non-Native Grassland
- Coastal Sage Scrub
- Disturbed Coastal Sage Scrub
- Southern Mixed Chaparral
- Maritime Succulent Scrub
- Southern Coastal Bluff Scrub
- Sandy Beach
- Rocky Intertidal/Bluff Face
- Disturbed Southern Needlegrass Grassland

GNATCATCHER PAIRS
- Observed in 1991
- Observed in 1991 and 2000

Other Sensitive Species as in Exhibit 15e

N

200 0 200

Feet

ESHA Boundaries

Project Boundary

Note: Delineations on this map are tentative, pending further investigation. Locations approximate. For Illustrative Purposes Only.
Image Base Source: AirPhoto USA, 6/2000.
Data Source: Commission site visit: May 2003,
The Keith Companies and URS Corporation: September, 2003.

DSM, 9/2003

CALIFORNIA COASTAL COMMISSION

Technical Services Division Mapping/GIS Unit

DISCLAIMER:

This is a draft map. Some of the delineations on this map are tentative, pending further investigation. None of the ESHA boundary delineations on this map should be treated as necessarily being indicative of Commission Staff's final determination of the boundaries of the areas that should be considered ESHA.

This map reflects areas on the Dana Point Headlands site that Coastal Commission Staff has tentatively concluded - based, in part, on information provided by the applicant as of the date of this map - constitute environmentally sensitive habitat areas ("ESHA") for purposes of Section 30240 of the Coastal Act (Cal. Pub. Res. Code Sec. 30240).

The determinations that underlie this delineation of the ESHA areas may change with the acquisition of new information. Similarly, Commission Staff's assessment of the location of ESHA may also change over time, as the physical situation on the ground changes. Moreover, the Commission itself is the final arbiter of what the Commission considers to be ESHA. Accordingly, this representation of staff's tentative conclusions - even if they were final - would not necessarily be reflective of the Commission's official position.

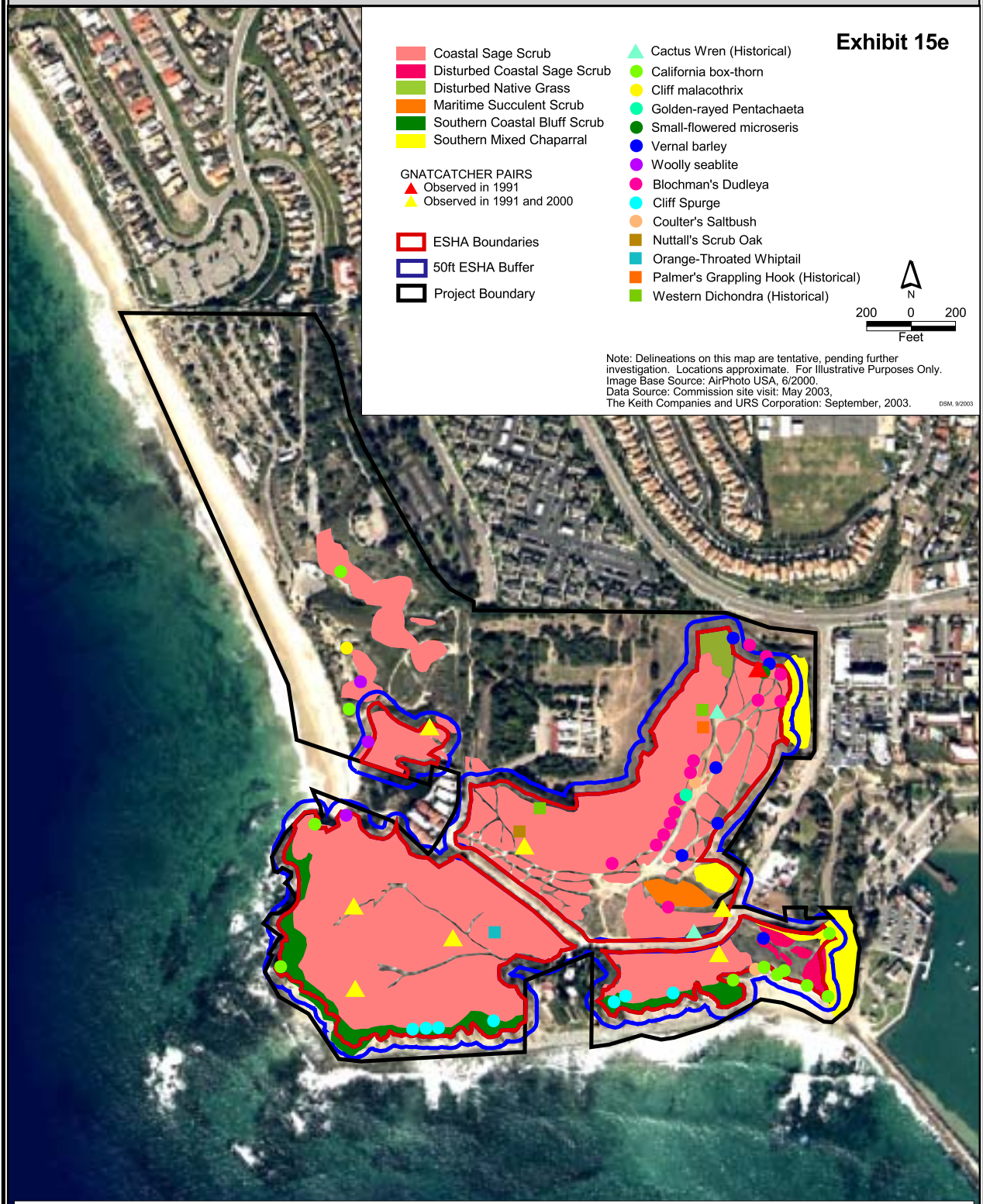
Finally, this map is not intended to show, and does not necessarily show, areas where Commission staff believes that development can occur without any negative impact on any coastal resource. This map is only intended to reflect the areas in which environmentally sensitive habitat is present. There may be other coastal resources that would be affected by development on other areas of the site. Consequently, it is not necessarily the case that Commission Staff is prepared to recommend approval of any development on the remaining areas.

DRAFT

Dana Point Headlands

Biological Resources (as revised Sept. 2003) and Location of Revised ESHA Boundary

Exhibit 15e



Note: Delineations on this map are tentative, pending further investigation. Locations approximate. For Illustrative Purposes Only.
Image Base Source: AirPhoto USA, 6/2000.
Data Source: Commission site visit: May 2003,
The Keith Companies and URS Corporation: September, 2003.

DSM, 9/2003

CALIFORNIA COASTAL COMMISSION

Technical Services Division Mapping/GIS Unit

DISCLAIMER:

This is a draft map. Some of the delineations on this map are tentative, pending further investigation. None of the ESHA boundary delineations on this map should be treated as necessarily being indicative of Commission Staff's final determination of the boundaries of the areas that should be considered ESHA.

This map reflects areas on the Dana Point Headlands site that Coastal Commission Staff has tentatively concluded - based, in part, on information provided by the applicant as of the date of this map - constitute environmentally sensitive habitat areas ("ESHA") for purposes of Section 30240 of the Coastal Act (Cal. Pub. Res. Code Sec. 30240).

The determinations that underlie this delineation of the ESHA areas may change with the acquisition of new information. Similarly, Commission Staff's assessment of the location of ESHA may also change over time, as the physical situation on the ground changes. Moreover, the Commission itself is the final arbiter of what the Commission considers to be ESHA. Accordingly, this representation of staff's tentative conclusions - even if they were final - would not necessarily be reflective of the Commission's official position.

Finally, this map is not intended to show, and does not necessarily show, areas where Commission staff believes that development can occur without any negative impact on any coastal resource. This map is only intended to reflect the areas in which environmentally sensitive habitat is present. There may be other coastal resources that would be affected by development on other areas of the site. Consequently, it is not necessarily the case that Commission Staff is prepared to recommend approval of any development on the remaining areas.

CALIFORNIA COASTAL COMMISSION
South Coast Area Office
200 Oceangate, Suite 1000
Long Beach, CA 90802-4302
(562) 590-5071

Th9a

ADDENDUM No. 2

October 3, 2003

TO: Coastal Commissioners and Interested Parties

FROM: South Coast District Staff

SUBJECT: ADDENDUM TO **ITEM Th9a (Dana Point Headlands)**, FOR THE COMMISSION MEETING OF OCTOBER 9, 2003

STAFF RECOMMENDS THAT THE COMMISSION ADOPT THE FOLLOWING CHANGES TO THE STAFF REPORT:

Deletions Shown in ~~Lineout~~
Additions Shown in Double Underline

1. **On Page 4, modify Staff Note, as follows:**

…Staff continues to be strongly opposed to developing the coastline in a manner that, at the outset, requires shoreline armoring. However, the circumstances present at this site leads staff to conclude that this may be where ~~a~~one trade off could occur in order to achieve protection of most of the significant biological resources on the site, concentrate development near existing developed areas, and take advantage of the other aspects of the project that will improve access and enhance coastal resources. A portion of the Strand has been previously developed with a mobile home park and most of the area presently has limited biological value. Whereas the biological resources are concentrated upon the Headlands promontory, Harbor Point promontory, ridge line, hilltop and the slopes of the bowl. Commission staff believe that, on balance, it would be most protective of coastal resources to concentrate development in the Strand and the bowl, protect the vast majority of the ESHA (much of which may currently be vulnerable), and obtain the other benefits of the project in exchange for allowing development in the Strand and in a small patch of ESHA~~, in exchange for allowing development in the Strand and more level areas of the bowl that do not contain ESHA~~. As explained more fully in Section V.G. (Alternatives) of the report, some limited, specific impacts to ESHA along the northeasterly slopes of the bowl (about 3 acres) and the development in the Strand may be allowable if the benefits of other aspects of the project outweigh these impacts. In support of this encroachment into ESHA, the Commission would need to find that the overall concentration of development (Section 30250) in the Strand, the bowl and along Pacific Coast Highway, while preserving the bulk of the delineated ESHA intact and retiring the underlying legal lots, and improving access and water quality serves to offset the limited ESHA impacts and the impacts of the revetment needed to protect the Strand development. Staff maintain that even with this additional impact –and inconsistency with Section 30240- such a project would, on balance, be most protective of coastal resources. Furthermore, Commission staff remain opposed to the ESHA impacts contemplated for the hotel, residential development of the southerly area of the bowl, and the various community facilities on the Harbor Point promontory because this development would significantly disrupt the on-site connectivity of the ESHA and would significantly degrade the habitat value of the ESHA and jeopardize the continuance of the resource.

Commission staff continue to believe that the goal of concentrating development adjacent to existing development and protecting ESHA (excepting the 3 acres noted above) can be accomplished while at once continuing to allow the basic concepts brought forth in the proposed and newly offered plans to proceed. There is ample space within the Strand and bowl to accommodate a balanced mix of residential, overnight visitor accommodations, public view parks, visitor facilities including lighthouse and veterans memorial, trails, and beach accessways. It also remains possible to develop the area near the corner of Pacific Coast Highway and Green Lantern with commercial uses and a hostel ~~without causing~~in a manner that minimizes or avoids impacts to ESHA…

2. **On page 31, modify Section V.A.2 (Effects on ESHA) as follows:**

…Using Coastal Act standards for determining ESHA, the project site contains approximately ~~50.3~~49.1 acres of ESHA (Exhibit 15a)…

Note: Correction above made due to calculation error. No change to the maps of ESHA contained in Exhibit 15 have occurred.

3. **On page 32, modify Section V.A.2 (Effects on ESHA) as follows:**

…The court's statement that "[a]t the very least, there must be some showing that the destruction is needed to serve some other environmental or economic interest recognized by the act" is a reference to a balancing approach that will be discussed separately below (see Section V.G.). Suffice it to say that there is no overriding Chapter 3 resource protection policy advanced by the current proposal that would authorize the construction of houses, commercial development, or roads in the coastal zone or the establishment of fuel modification zones within sensitive habitat. Furthermore, any benefits that are provided by this project could be achieved without ~~the destruction of~~the proposed degree of disruption to the ESHA, including degradation of the on-site connectivity of the habitat, as there are alternative locations for the hotel and public facilities that would ~~not result in~~minimize or avoid impacts to ESHA (as compared with the present proposal)…

4. **On page 41, modify Section V.A.6 (Other ESHA Issues) as follows:**

…If development were to occur, it would cause significant adverse impacts upon ESHA. Other impacts from developing each lot would also occur, including significant visual impacts. In order to minimize or avoid this situation, the LUP must contain provisions for a lot retirement program, such as a Transfer of Development Credit (TDC) Program and reversion to acreage process, that would allow the concentration of development in the Strand and a portion of the bowl ~~subdivision and more intense development of non-ESHA areas, such as the more level areas of the bowl and the Strand,~~ in exchange for retiring any existing development rights upon those lots that partly or wholly contain ESHA. The LUP contains no such program, thus, the LCP does not achieve the purported ESHA protection program…

5. Beginning on page 69, replace Section V.G. (Alternatives) with the following:

The proposed LUP amendment would allow the City to authorize the construction of single family residences, commercial structures including a hotel, roads, parking areas, and community structures in areas that qualify as ESHA. This development would significantly disrupt the habitat values of the ESHA and would not constitute uses dependent on the resource. Thus, the proposed LUP is inconsistent with Section 30240 of the Coastal Act and must be denied. Furthermore, the proposed LUP amendment would allow the City to authorize the construction of single family residences in the Strand in an area that necessitates significant geologic remediation and construction of a shoreline protective device to protect and maintain the stability of the slope upon which the new residences would be built. This development would be inconsistent with Section 30253 of the Coastal Act. The proposed LUP is also inconsistent with several other sections of the Coastal Act identified above. Thus, the LUP must be denied.

There are alternatives to the development plan contemplated in the proposed LUP that could be found consistent with the Coastal Act. For instance, the LUP could designate the ESHA for preservation and concentrate development in the portions of the Headlands area that do not contain ESHA, such as the more level areas of the bowl. Meanwhile, the Strand could be designated for an alternative, less intense use that would not necessitate the geologic remediation and new shoreline protective device that is presently contemplated. The other inconsistencies between the LUP proposal and the Chapter 3 policies listed above could also be remedied.

In discussions with Commission staff, the City and the landowner suggested that, even if the Commission were to reject their arguments for how the proposal could be seen as being consistent with the Chapter 3 policies of the Coastal Act, it could still be approved through a balancing approach, pursuant to sections 30200(b) and 30007.5 of the Coastal Act. The Commission does not agree with the City and the landowner that the current proposal could be approved through the use of balancing because, pursuant to Section 30200(b), a balancing approach can only be invoked when there is a conflict among Chapter 3 policies. The current proposal does not present any such conflict. The Coastal Act simply requires that the plan be denied for the multiple reasons listed above.

However, the Commission does agree with its staff's conclusion that there are modified versions of the current proposal that, even though remaining inconsistent with some Chapter 3 policies, would advance resource protection as required by other policies to such an extent that it would be inconsistent to deny ~~it~~them, thus presenting a conflict that could be approved through the use of balancing. In order to promote a dialogue and in the interest of open decision-making, the Commission hereby presents the broad outlines of its thinking about the approvability of such alternative versions of the current proposal.

Section 30200(b) states that, "[w]here the commission . . . identifies a conflict between the policies of this chapter [Chapter 3, sections 30,200-265.5], Section 30007.5 shall be utilized to resolve the conflict." Section 30007.5 states that any conflict among Chapter 3 policies must be resolved "in a manner which on balance is the most protective of significant coastal resources." It goes on to state:

> *"In this context, the Legislature declares that broader policies which, for example, serve to concentrate development in close proximity to urban and employment centers may be more protective, overall, than specific wildlife habitat and other similar resource policies."*

For the Commission to utilize the conflict resolution provisions of Sections 30200(b) and 30007.5, the Commission must first establish that a substantial conflict between two statutory directives contained in Chapter 3 of the Coastal Act exists. The fact that a project is consistent with one policy of Chapter 3 and inconsistent with another policy does not result in a conflict. Rather, the Commission must find that to deny the project based on the inconsistency with one policy will result in coastal zone effects that are inconsistent with another policy."

The basis for a potential conflict in this case is that, as noted above, there is an existing certified LCP and a property subdivision that divides the Headlands area into small lots, some of which are wholly ESHA. In addition, the existing certified LCP contemplates development not only in the bowl area, but also further seaward, away from existing development, out upon the Headlands and Harbor Point promontories that jut out into the Pacific Ocean. Thus, there is a potential under the existing regime that development could occur that is inconsistent with both Section 30250's mandates to concentrate development near or contiguous with other development and section 30240's mandate to protect ESHA against significant disruption of habitat values, and to limit uses of ESHA to uses that are dependent on those resources. The Commission has a responsibility to consider changes that would prevent development that is inconsistent with the Chapter 3 policies of the Coastal Act.

Ideally, all of the ESHA on the project site should be protected. However, there are circumstances at this site which suggest that protecting all of the ESHA places severe constraints upon locations to concentrate development. In order to allow for a reasonable amount of development on this site and to ensure that all development is concentrated in the areas nearest to existing development, the Commission concludes that it would be necessary to allow development to encroach slightly into the ESHA in the area near PCH. In order for such a project to remain most protective of coastal resources, the amount of encroachment must be minimized. One configuration that would achieve this balance would be to allow the development (1) in the Strand, since it is close to developed areas and in an area devoid of ESHA and (2) in and around the bowl, where it is near developed areas and would encroach into no more than about 3 acres of ESHA located on the slopes that form the rim of the bowl. This configuration has the additional benefit of balancing the soil movement on-site, as the stabilization of the Strand requires the removal of approximately one million cubic yards of soil, which could be placed in the bowl area, eliminating ancillary negative impacts upon public access associated with the export of such huge quantities of soil from the site.

Thus, some impact to the ESHA located in the bowl could be considered in order to concentrate development in the Strand and the bowl and still provide for a reasonable amount of development. This ESHA impact must be focused in a location that minimizes the overall adverse effect of that impact on the remainder of the ESHA that will not be impacted. All of the CSS ESHA in the bowl is of similar quality. Of paramount importance in this case, is to maintain on-site habitat connectivity and maintain contiguous blocks of habitat that are shaped and positioned in a manner that minimizes potential edge effects. For example, retaining and improving the contiguity of the ESHA located along the hilltop, ridgeline, Harbor Point and Headlands promontories and the intervening habitat areas would be valuable. If ESHA must be impacted, it would be preferable to position the impact in an area where it would have the least effect upon on-site habitat connectivity and allow retention of large, contiguous blocks of habitat that are shaped in a manner that minimizes potential edge effects and connects the more inland habitat with the bluff top areas on the two promontories. For example, the ESHA in the more level portions of the northeasterly slopes of the bowl (approximately 3 acres of habitat) are at the extreme inland perimeter of the habitat and is closest to Pacific Coast Highway and the existing development on Selva Road.

It should be noted here that the argument above does not apply to the planned hotel site (Planning Area 9). In contrast to the area identified above, the hotel site is centrally located within the ESHA on the site. Constructing a hotel, or any other similar structures, in this location would significantly disrupt the habitat connectivity within the ESHA. Furthermore, placing development in the middle of the ESHA will increase adverse 'edge effects' upon the habitat by several orders of magnitude. Thus, the Commission could not find the impacts upon ESHA at this location acceptable, even under a balancing approach.

If the current proposal were modified to require (1) the retirement of any legal lots that are partly or wholly within ESHA (excepting the impact that could be considered as identified above) and (2) re-designate land uses to ensure that no development would be approvable within ESHA (excepting the impact that could be considered as identified above), approval of the proposal would protect most of the ESHA that may now be vulnerable, and as much as could reasonably be protected, in furtherance of (though not complete compliance with) ~~accordance with~~ the directive in Section 30240 of the Coastal Act. Under that scenario, there would be a statutory directive that ~~would only~~could best be fulfilled by approval of the project. Denial of the project would forfeit the opportunity to fulfill the Commission's charge under 30240. This would create a conflict situation.

If, in addition, the proposal were modified to more clearly preserve the hilltop, ridgeline and the associated landform and the seaward portions of the site (i.e. the Headlands and Harbor Point promontor~~y~~ies) by concentrating development in the bowl and the Strand area, approval of such a proposal would also ensure that new development in the Headlands area would be as close as possible to the existing developed areas, in accordance with the directive in Section 30250 of the Coastal Act. Concentrating development in these areas has several benefits in terms of addressing water quality issues as well as accommodating public access features. For instance, the bowl and Strand are located within the same drainage area as the existing development to the north and northwest. Storm water and low flows draining from these existing developed areas presently flow to the ocean, untreated, causing adverse impacts upon water quality. By concentrating development in the bowl and Strand areas, storm water flows from the existing developed areas and new development in the bowl and Strand can be captured by a single drainage system that incorporates water filtration devices that could treat all of the water prior to discharge to the ocean. Accordingly, approval of such an LCP would satisfy the Commission's responsibilities under both Sections 30240 and 30250.

In sum, were the Commission presented with a modified version of the current proposal that would protect all of the ESHA (excepting the impact that could be considered as identified above) and concentrate all development in the bowl and Strand and away from the promontories and hilltop, there would opportunities to comply with Chapter 3 mandates that would be lost by denying the project. That would not change the fact that there would be other Chapter 3 policies that would still be violated by the proposal as a whole, most significantly by the extensive construction on the Strand in violation of Section 30253 of the Coastal Act. However, where approval of a proposal would fulfill the Commission's duties under certain provisions of Chapter 3, and denial would forfeit an opportunity to fulfill those charges; but approval would also be inconsistent with other Chapter 3 policies, the proposal presents a conflict among various Chapter 3 policies that could serve as a predicate for a balancing analysis.

The benefits to concentrating development in the bowl and Strand identified above are significant, but are not necessarily so significant, in and of themselves, as to justify authorization of a new LUP that would allow the construction of a new shoreline protective device to accommodate new development. However, once a balancing approach is adopted, the Commission can consider additional benefits of the project as well. For example, the proposal does include some significant

public access improvements, such as the dedication of the Strand beach to public use. The City's informal submittal also includes additional public access components such as a funicular, additional restrooms, and additional lateral accessways.

In sum, the Commission believes that a proposal that would protect all of the ESHA (excepting the impact that could be considered as identified above) that may now be vulnerable to displacement, concentrate new development near existing developed areas, and substantially increase public access to the beach, even if it would allow for the construction of new development that requires the construction of a shoreline protective device in contravention of section 30253, may well satisfy the 30007.5 standard of being, on balance, most protective of significant coastal resources.

The Commission notes that this sort of proposal was discussed in meetings among the applicant, the landowner, and Commission staff. In this case, Commission staff felt that a proposal of the type outlined above would be most protective of coastal resources. With that in mind, Commission staff suggested to the City and landowner that, were it willing to modify its proposal in accordance with the suggestions above, Commission staff could recommend approval of such a proposal. However, the City and landowner were unsupportive of the suggestion and rejected it. Consequently, the Commission is not now proposing this as a suggested modification with which the proposal could be approved. Moreover, because the suggestion is not formally before the Commission, the Commission has not conducted the detailed level of review necessary to conclude that such a proposal would necessarily be approvable. The Commission simply notes that such a proposal would create a conflict that would authorize the Commission to balance the competing mandates of various Chapter 3 policies and that such a balancing could be used to approve such a proposal.